

ARMED FORCES

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MARINES

MANAGEMENT



Feature

*Secretary of Defense
on
Management*

Departments

- *What's New in Suggestions?*
- *Washington Management*
- *Conservation Thoughts*
- *Service Schools*
- *News Briefs from the Services*
- *Book Reviews*
- *Letters to the Editor*
- *News and Activities of Armed Forces Management*

On the Cover

The Hon. Charles E. Wilson, Secretary of Defense and former board chairman of General Motors, has lately been recognized as one of the nation's most able industrial leaders. ARMED FORCES MANAGEMENT is proud to present this remarkable man's views on management in this issue.

Vol. 1, No. 1, October 1954

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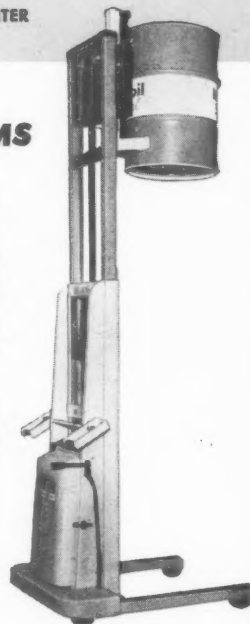
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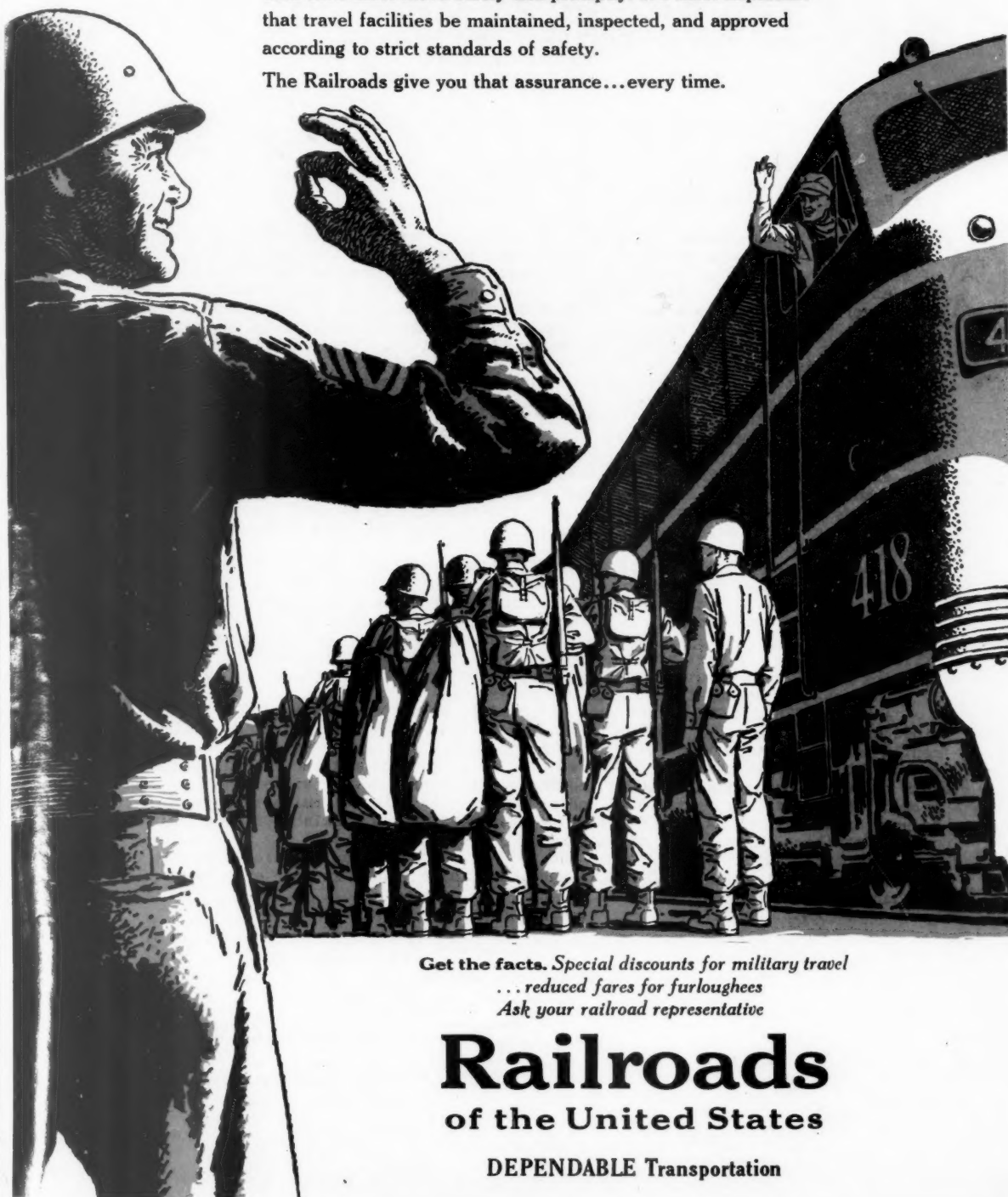
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ROY B. SOUTHWORTH
President

October 1, 1954

Dear Reader:

In 1950, while cost-consciousness was still in the early dawn of awakening, I conceived the need for a medium to coordinate the widespread thinking on the subject of management. About the middle of this year it became apparent that a publication, such as this, should be a reality and not just an idea. With that in mind, I visited with several of our leaders in the Department of Defense, and those with whom I discussed the prospects of a magazine of this type were tremendously interested in its publication. ARMED FORCES MANAGEMENT makes its debut into the journalistic field because of this interest.

Realizing that management, as a vital necessity to successful operation, is as fundamental as financial structure, industry started spending tens of thousands, each year, in establishing management programs. It has been found that the dividend yield far exceeded the original investment and that utilization of management techniques are necessary to compete in everyday business.

ARMED FORCES MANAGEMENT will interchange the latest techniques and developments in the management field, between industry and the services, and between the branches of the Defense Establishment. To those of you who have an earnest desire to save the taxpayer money, this magazine is dedicated in the hope that this laudable wish may be consummated.

Management is definitely not new to the Armed Forces as some departments of various service branches have been training their personnel for several years. Costly, and a time-consuming project, training has not, as yet, reached into every corner of the Defense Department. Secretary of Defense Charles E. Wilson feels it is imperative that the multi-billion dollar defense program be administered with top efficiency, using the best management practices. Each person responsible for the spending of dollars, or utilization of personnel, should be cognizant of the concepts of management and employ them in his operation.

ARMED FORCES MANAGEMENT has been referred to as a "trade magazine" to the combined services. This, in itself, is a new approach. Many fine magazines are currently being published, each with its own specialty, and many devote editorial space to the subject of management. My fervent hope is that you will accept this magazine as a medium through which ideas may be exchanged between the services, and that management techniques may be explored and an analysis made to determine their application to your installation. A most competent editorial staff is available for your use in presenting these ideas to all of the Armed Forces.

I encourage your comments as to how we can best serve you, our readers, and wish to assure you that we of ARMED FORCES MANAGEMENT have joined in your efforts in the furtherance of National Defense.

Yours very truly,

Roy B. Southworth
President

RBS/imh

Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it.—Samuel Johnson.



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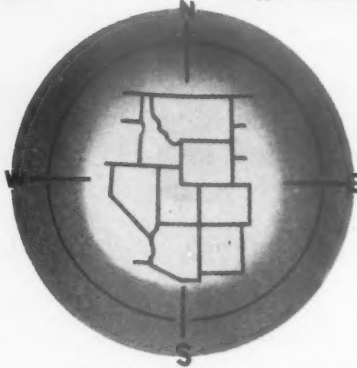
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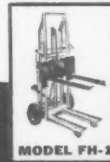
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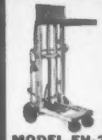
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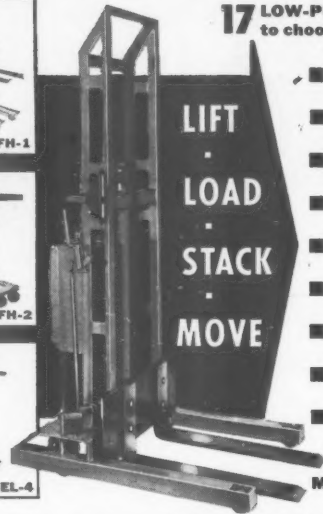
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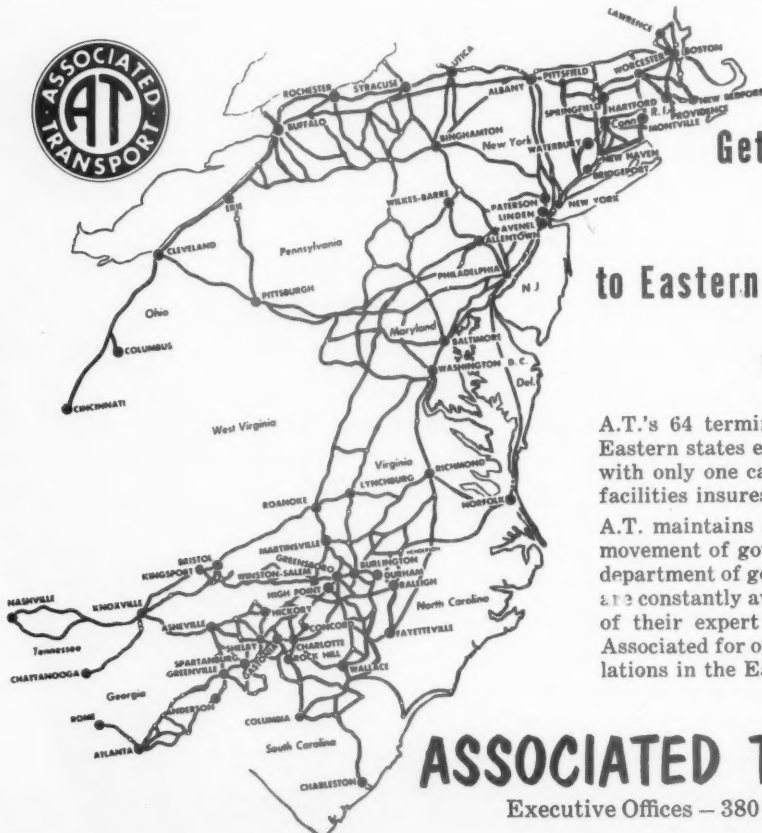
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The Secretary of Defense — On Management

Secretary
of Defense
HON. CHARLES E. WILSON

THE cost of national security will remain high for many years. This cost must be bearable not only in the sense that the burden can be carried without wrecking our economy but also be within the limits of what can be supported without retarding the future growth of our country. Over the long pull, economic strength is an indispensable prerequisite for military strength. We must not fail in our efforts to achieve an ever-increasing economic strength for the free world. This strength, together with our faith in our free society, is the real source of our military power.

The military programs evolving from the New Look provide for the rapid integration of new weapons as they are proven and become available. They reflect the new relationships between men and materiel created by these new weapons.

The amount of the new funds which are being requested from Congress for the Department of Defense was importantly influenced by the new military program. Our estimate of the expenditures that must be made during fiscal year 1955 was influenced both by our new military program and the commitments previously made under earlier appropriations. The fact that we are still in the buildup state in some of our military activities requires expenditures at a somewhat higher rate than will be true when the program levels off.

The civilians in the entire Defense Department—and by that I mean to include the Army, Navy, and Air Force—have a great responsibility in regard to the rate of expenditures planned to carry out our military programs. Right here I would like to speak of the splendid way in which they have cooperated with each other and with the men in uniform. This is greatly contributing to the important progress that is being made.

Our duty is to provide a sound defense for this country, and the Defense Department must achieve this by obtaining more combat effectiveness for every dollar spent. Considerable doubt has been expressed in some quarters as to the feasibility of this objective. I would like to explain how we are going about this, how it relates to military planning, and why I am sure we can do it.

There are three distinct methods of achieving economy in military affairs. First, there is economy in planning (what some planners call "economy in forces"). By this we mean adopting a strategy based on the use of selected force elements and weapons systems best suited to security needs. This is primarily the job of the Joint Chiefs of Staff, who, on the basis of stated national policies, objectives, and resources, evaluate the capabilities of potential aggressors and

devise the most effective strategy to meet such conditions. In this they select the types of forces and weapons which can provide the greatest military effectiveness within the available manpower and resources.

Second, there is economy in programing. By this we mean the provision of the proper support forces and resources, such as manpower, materiel and bases required to maintain the degree of combat readiness and effectiveness necessary to implement the strategy we have adopted. It is in this area where the logistic and manpower planners spell out the detailed military requirements of men and materiel which in the end determine the money to be requested.

Economy in programing also means the achievement of a proper balance among all the various elements making up a military program. Men, materiel, bases, activation of new organizational units, training rates, activity rates, deployments—all must be projected 2 and 3 years into the future and must be kept in balance.

Third, there is economy in operation. This relates to the execution of the plans and the accomplishment of the programs that have been laid out and are reflected in the annual budgets. This is the area which has received the most public attention and at which most of the criticism of waste and inefficiency has been directed. It is important, yet it is really just 1 of the 3 general means of achieving greater economy. This third classification of important areas in which greater economy can be effected—economy in operation—particularly requires the interest and cooperation of hundreds of thousands of men and women in the services. Steps are being taken to encourage and cultivate this important type of cooperation.

It is in this third category that we have perhaps been criticized the most in the Defense Department because so many hundreds of thousands of men and women—literally millions of them—have been in and out of the services. Each of them has seen some waste—some waste of their own time or of someone else's time, some waste of materiel, or something or other that they realize could be done better.

Therefore, when we say that our objective is to achieve more defense for every dollar spent, I would like to emphasize that we expect to do this by making intelligent savings through economy in forces, economy in programing, and economy in operations.

Economy in forces is reflected in the carefully considered and unanimously agreed long-range plan of the Joint Chiefs of Staff, of which the fiscal year 1955 phase is reflected in this budget.

Economy in programing is receiving the concerted and conscientious effort of the military and civilian members of the Defense team in examining and validating the planning factors and procedures used in the computation of man power, materiel, and construction requirements and in determining peacetime stock levels and war-reserve requirements. These reserve

(Continued on page 20)

Human Relations in Leadership

A Capsule Account of the Silent Revolution

by DR. DONALD A. LAIRD



Industrial Consultant
Dr. Donald A. Laird

"OUR vice president, in charge of manufacturing, hammers away that we should keep the workers guessing," a middle-aged supervisor said, "But last week-end at a Leadership Conference at the state college, they had charts showing the advantage in getting workers to take part in the making of decisions which affect their work."

He shrugged his shoulders. "Which one am I to believe?" After a thoughtful pause he continued, "Well, I know who butters my bread!"

His vice president was probably one of those men who had hit upon some rules of thumb which, so far as he could tell, worked well enough in leadership. He was, so to speak, leading by ear and was not reading the notes.

Earlier generations of leaders had to lead by ear. There were no notes for them to follow. Sometimes they got harmony, sometimes discords.

But today we have a knee-high stack of research reports which bear on leadership. These findings give the first really sound basis for forming a personal or company philosophy of leadership with which the leader can strengthen his hand of favorite cut-and-dried methods.

These findings are not as widely known as they should be. They are published in technical journals which have only a few readers. The practical man or woman seldom sees these reports. And if they did, the technical and mathematical methods might bewilder rather than help. In addition, the business and trade papers have shown an understandable reluctance about informing their readers of discoveries which might upset a subscriber's pet notions.

"All our readers are just 'natural-born' leaders," the editor of a metal trades magazine described his dilemma. "If we printed this new stuff, they'd think we were criticising them personally. So we play safe and let sleeping dogs lie."

A New Hand is Dealt the Leader

It is true that many former teachings on "how you, too, can be a leader" have been upset by the findings. But it has been a constructive upsetting, except for those few leaders who are inclined to defend themselves and cling the more tenaciously to an outmoded philosophy of leadership.

The old teachings have not been tossed into the discard, forcing you to draw a new card blindly. Better cards have been dealt out, face-up, so the leader can strengthen his hand before discarding his obsolete cards.

There have been wide consequences of this discarding of some old leadership notions, and picking up better methods in their place. Some organizations, for example, are having stormy times because there is a conflict between the old and the new within their own ranks (as our opening incident illustrated). The

organization may be business or labor, a religious or a political group, a government or uplift agency—we have seen each kind torn by internal strife over conflicting leadership philosophies. A storm and stress period.

Another consequence is that some organizations are inching ahead of their competition as a result of serious training programs for bringing executives—in all brackets—up to date in the newer concepts of leadership. A trickle more of employee loyalty and co-operation, and a hairsbreadth more productivity, may make the difference between a going concern and liquidation. And the newer leadership methods do yield more than that trickle and that hair.

Some of the oldest firms in the automotive and the oil fields have recently undergone thorough overhauls to update their leadership methods. In the case of the oil corporation, it was a 5-year program of training introduced by the top management. With the automotive company, it was a sudden revolution when new heads came into control.

As in most of the successful instances of updating executive leadership, these training programs started to modernize at the top, then work downward. (It is not astonishing that most of the middle-level leaders seem to think it is only the foremen and lower levels that need improved methods.)

There are consequences, also, for the individual worker, or follower. These are favorable consequences, too. Satisfaction and morale in general are higher when leadership is in step with the newer findings. There is more fun from work, greater self-respect, less playing hookey from work.

Perhaps the greatest consequences are to the person who is reading this—the person who aspires to leadership nowadays. In past times push, ambition, technical skill, self-confidence, square shooting, and "financial sense" may have been sufficient—with a few tricks of the horse-trader thrown in.

The changing current today has altered these requirements. Records indicate strongly that something more counts heavily under present competitive conditions. This something more, broadly stated, is "human relations sense." This human relations sense has probably counted for some time, but the tradition of Astor, Flagler, Frick, Gould, Knudsen, Swift, and Vanderbilt, among other moguls, overlooked it in the pattern of leadership they set. This is one reason why new cards were needed.

Why New Cards were Needed

Some traditional views of leadership have been upset partly because of worldwide changes in our com-

plex relations with other individuals and groups. The relationships between people as we live, play, and make a living have changed in many little details since World War I. You can find these summarized in chapters 9 through 14 of our book "Practical Business Psychology." David Riesman devotes an entire book, "The Lonely Crowd," to some of them. These little shifts in social interactions seem to add up to make a big difference in the demands upon today's leaders.

In short, the changing times may make leadership as well as products obsolete. (An obsolete leadership might explain the shift, which worries many, from dependence upon the leader to more dependence upon group solidarity.)

The greatest impetus to discarding some of the older teachings probably came from the spread of the scientific and engineering approach to all problems. One modern executive described the old favorite guides as "reasonable sounding hot air, with a few platitudes thrown in to make them sound like Almighty Wisdom."

The engineering approach has a vigorous skepticism of anything that just sounds reasonable but hasn't been demonstrated with mathematically weighed facts. Find out—don't guess, is the cornerstone of this operationalism.

And after you do find out, still use a wide margin of safety when you put the findings to work. If you want the automobile to be good for 100,000 miles, build it so you figure it will last 25% more miles. In terms of our comparison with playing a hand of cards, play them conservatively until you are sure—and watch out that a joker or wild deuce does not upset your calculations.

The spread of this finding-out approach is reflected in the long-term research projects on leadership methods and results which several corporations are now supporting—not many companies, but a growing number. There may be significance in the fact that almost all of these firms have dominating positions in their fields, more than inches ahead of their competition. They are bound to keep ahead.

But there has already been sufficient research to clear the ground and recognize some critical landmarks. The bottlenecks are minds that need to be cleared so they will be guided by the new landmarks. As the probably mythical but perfectly plausible incident of the old non-com who was being instructed in the new methods the force was going to use with enlisted men. "All right, Chief, I'll lead them—but the ba tards better follow!"

There is some shock, and resistance at times, when a finding upsets some favorite theory or personal inclination. There is almost always a period of bewilderment before the leader gets new bearings and organizes new ways of thinking and working with others.

Experience has shown that there are a few strong-willed members of the old guard who just won't believe it, or shrug it off with, "Well, what of it—haven't we been making money?" The automobile and oil company we mentioned as upgrading their executives, rare across many such who could not be weaned from doing what just came naturally to them. These finally had to be put out to pasture. The automotive firm pastured the majority of its upper echelon executives.

Two New Emphases in Leadership

The trend of research findings emphasizes the importance of the human relations point of view. Many people think this means be-nice-to-others-because-it-pays. Or, so others will be nice to you in return. Or, just because it's the decent thing to do. The "being nice" might be a wage increase, providing cool drinking water, pleasant work conditions, being polite and friendly, or giving unexpected gifts. There is much more to human relations than such superficial things.

For one thing, the leader needs to *understand how other people are going to feel about what he does, and before he does it*. The engineer understands what will happen inside a metal if he heats it white hot. When an executive tries to lead people it also helps if he understands how they will feel inside if he simplifies their work for them, or fails to get the raise he promised them, or attempts to win an argument by beating them to the draw. (In each of those instances he will get negative feelings in return for his efforts.)

In short, the new leader has a pretty good advance idea of the consequences a proposed action will produce inside other people—hostility or co-operation, discouragement or encouragement, stalling or increased productivity. An advanced idea based upon research findings, not on guesswork or hunches about how people should act, but perhaps don't.

Research in human relations finds out how people from various groups feel and behave towards others in everyday situations when something is said or done, to or for, them.

Underline the words *toward others* in your thinking; that represents the interactions between human beings. Once you understand some of these interactions, you will be able to see through such puzzling things as why some workers deliberately hold down their output although they are on piece work rate. Or, why legislation which was intended to cramp labor unions seemed actually to increase their membership.

For the other thing, it is essential for the leader of today to *understand that it is almost always groups rather than individuals who are being led*. A person can be taken out of his group, but it is practically impossible to take the influence of his groups out of his thinking or actions. It is a far-reaching oversight to imagine that one is leading individuals, unless you are one of a pair of castaways on an uninhabited island.

Consider this boss talking alone with John Brown in a remote corner of the shop. This aside is done to get away from group influences. It is not that simple.

Brown is not alone. He hears his groups' voices in his head. His attitudes toward what the boss says are determined to a large extent by the goals and attitudes of the groups to which he feels he belongs, or wishes he belonged to. Not much chance to talk Brown into eating in the company cafeteria if he feels the people in the restaurant around the corner are more "his kind of people."

And Brown will not have much success leading his teen-age daughter not to drive the automobile, if her group of teen-age friends think she should have use of the family car.

Over and over again research records show that the leader must recognize the power of the group over

individuals. And work with or through the group forces rather than against them. This is slower than bluntly ordering "You must," but has long-run advantages. The Man of Action usually has to struggle within himself before he can accept this grass roots approach.

The new cards cannot be played slam-bang according to the old rules of the game. The rules are made up more by the forces from the groups than from what the leader would like to have done right now.

Can We Trust the New Cards?

Some of the newer teachings are so opposed to common practices, that it is natural to wonder if they can be true. Or, are they just another version of old-fashioned hot air? Any individual finds it a shock to be told that much of his thinking has been done for him by the groups he is associated with, and that he has not been the master of his own attitudes as he supposed he was.

We can get a basis for answering this pertinent question in a hasty review of how the new cards have been discovered. They have come from researches in human relations and group dynamics. Two interwoven fields which bear directly on the problems of leadership. Research in these fields has been steadily increasing since World War I.

The first 20 years of this period were devoted mostly to devising and proving-in procedures for measuring the methods and results of leadership. There was, of course, much stumbling and many blind alley leads. But this has now become a highly specialized field. Special mathematics of probabilities have been developed which would baffle some engineering graduates, but which prevent much of the stumbling.

Practical results from this groundwork were coming in by World War II, and were seriously applied by the military organizations. New technical journals appeared, to publish research reports. But a share of the reports are not published; they are kept under wraps for the exclusive use of the military, or the firm sponsoring the analyses.

In the U.S. there are at present a couple dozen non-profit research centers, or institutes, which are devoted primarily to these problems. One of the largest of these has a professional staff of 115, in addition to the necessary clerks, computer operators, and such. More than three million dollars a year is being directly invested in this non-profit work in human relations research. Grants from foundations, and contracts with government agencies support a sizeable share of the work.

The work is usually done by teams who cover the psychological, sociological, anthropological, and industrial approaches. It is not one man riding a hobby horse, but a team in the drivers' seats. A team so the total situation is covered.

Such teams have been working on systematic research programs, directed toward what appear to be basic problems. Not temporary expedients. They seldom do any random, hit-or-miss probing of superficial odds and ends. There is the sustained follow-through of a continuing program. One team, for example, is working on interactions and leadership in committee work. Another institute on changing people's opinions.

Others on forming coordinated groups, as in military aircraft and naval vessels.

Some research is done in actual office, factory, and military situations. Sometimes the employees do not realize they are being guinea pigs; conditions remain that normal. The interreactions of people has been studied in their natural working habitats on railroads, auto factories, insurance offices, aircraft, staff meetings, developmental laboratories, forests, submarines, and housing developments, among many others.

In these natural settings, business goes on as usual while figures are collected about production, absences, cost consciousness, group pride, prejudice, grapevine gossip, job details, interest in the work, the methods of the bosses, and other natural variations.

Back at the research center, the figures are analyzed to find how much cause-and-effect relationship there is between the variables. The mathematics of probabilities counts heavily in this phase, and electronic computers are often used.

It takes months for the research team to plan the correct experimental design to fit a situation. Then more months to do pilot runs to catch any bugs in the plan. More months (or years) to gather data from the actual operating situation. Then more months (or years) for the teams to analyze the figures from the computer tapes and prepare a report of the findings. Slower than jumping at conclusions, but much more sure as a guide.

A 16-page report may represent 4-years teamwork and a direct investment of \$100,000—and be worth it when the findings are put to work.

But questions are often raised which cannot be easily tested in an actual office without disrupting operations. Such as finding what happens when one member of a crew whispers to the others to "slow down." (Answer: they did slow down from 12 to 20%.) In these cases, ingenious laboratory setups are used to isolate what seem to be some basic factors to put under the microscope.

These laboratory setups often seem artificial, if not downright foolish. But they have proven to be highly useful. They have the merit of being able to be repeated and checked. Measurements can also be made more accurately.

After all, people react to each other in a temporary situation, as well as at directors' meetings, or to the new general manager.

And that is the central problem of leadership—how are these people going to react to us, if we do this, in this particular situation?

Watch the Deck, not the Single Cards

"I read last night," the eager new supervisor told his department head, "that there is better group spirit when people are in a circle rather than in a long row. So, what say, let's change the layout in this office?"

The new man did not realize that there are already too much group spirit—of the wrong kind. But he was doing the understandable thing of rushing in to apply a new nugget of information before he had analyzed the total situation.

We get acquainted with new facts one at a time. This may give the misleading impression that each

(Continued on page 35)



How to RECOGNIZE Executive Ability When You SEE It

by Robert F. Pearse, Ph.D.

Worthington Associates
Robert F. Pearse, Ph.D.

The Hunt For Executive Talent

FROM the current hue and cry that surrounds the hunt for executive talent in industry, one might infer that finding and developing executives had become just about the most important business of American business. Throughout the country, executive recruiters descend upon the nation's campuses in much the same manner that baseball scouts hunt for "ivory" in sandlot and minor league teams.

The parallel between today's search for executive talent and the history of scouting for baseball talent is an interesting one. Long ago, major league baseball teams depended largely upon a player's native ability to carry him to the point where he reached their notice. With this method, many men of outstanding personal ability did reach the big time. However, many of the larger teams long ago decided that they could not afford to leave the discovery of outstanding players to chance. They also learned that even a good man could be made better through a planned program of training and seasoning before he was brought up to the top. Hence, we saw the vast system of baseball "farm" clubs developed, a system that year after year provided pennant winning teams with top talent. This has been done with what has become almost monotonous regularity for those baseball fans who reside outside of New York City.

In a similar fashion, formal executive development programs in industry have grown rapidly during the past few years (1). The basic reasons for the growth of planned executive development are roughly similar to the reasons behind baseball's farm system. If an organization can identify young men who possess outstanding executive potential at an early age, then train and hold such men, they should be able to reap the benefits of their superior executive performances when such men rise to positions of top executive responsibility.

This search for executive talent is of importance to the Armed Forces in at least two ways. First, many of the companies which supply material to the Armed Services will be able to do this more efficiently and more effectively if they have better executives directing their corporate activities. Second, the Military Services themselves have become "big business". They, too, are interested in improvements which might be ob-

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tained from adopting techniques for developing executives that have been worked out by industry.

Some Problems in Recognizing Top Potential

At the core of every executive development program lies the problem of identifying, or correctly appraising, men who possess such top potential while these men are still down in the ranks, perhaps even just entering the organization. Unless such talent is correctly identified, the organization may waste considerable amounts of time and money in giving specialized training to men who are not inherently capable of handling top responsibility when finally promoted to positions which require them to do so.

An obvious problem in sorting out the wheat from the chaff in executive ability lies in the fact that previous selection factors have eliminated the obviously poor candidates. Survivors all sincerely believe that they want to be executives. Most of them are willing to work to become executives—even though some are not completely certain that they would feel comfortable in this role.

Proper use of available facts about an executive candidate presents another problem in recognizing executive ability. How does one objectively and realistically evaluate the facts about a man's past performance? If he got top grades in school, does this mean that he is a budding genius, or that he is a bookish grind who was so withdrawn from his classmates that he spent all his time in the science lab? If a man seems to show a brilliant history of rapid promotions within a single organization, does this mean that natural talents are taking him up the ladder, or does it mean that he is the son-in-law of the president of the firm?

In addition to the difficulties inherent in trying to decipher what lies behind a man's record, there are other obstacles. Some of these are connected with the fact that we tend to evaluate a man's background (and hence his potential) in terms of unconscious factors in our own personality and experience (2). If a man belonged to a fraternity with which our own society was competing during college days, we may perceive him as being less qualified than a man with an almost identical work history who—in addition—is a bosom buddy from our own "Etta Betta Pie" brotherhood. This can happen regardless of how determined we are to be absolutely objective about judging the two men.

The face to face interview has sometimes been considered an accurate method of judging executive character (3) (4). Yet, the fact is, that when we talk to a man, we cannot help but be impressed by his appearance, his voice, and his mannerisms. These may be accurate indications of what the man is. On the other hand, if these serve to remind us of someone we liked in the past, we may find ourselves making favorable judgments about him. Or, the candidate may remind us of a hated rival, or of a successful competitor of

past days. Then we have a difficult time viewing him with anything approaching true impartiality.

Perhaps the type of man which might be described as **The Smooth Salesman** is one of the most difficult types to identify correctly or appraise in a face-to-face interview. Such a person is often a charming, friendly, utterly likeable chap who unconsciously oversells himself. A corporation which we shall refer to as "Wilson Electric" tells the story about their experiences with such a personable personal salesman. They refer to this executive candidate as their "\$25,000 Mistake." Before they could separate this gentleman from the organization, the Director of Executive Development of the company estimates that his services cost the company at least that amount. Their particular "Smooth Salesman" simply oversold himself without anyone's realizing it—and he did his selling to hard-headed, experienced executives of the company.

Another type that is difficult to correctly identify by interviewing in hiring situations is the mildly eccentric individual who has personality problems which interfere with his successful job performance, yet which are not so severe as to attract notice upon even close preliminary observation. Dr. Lawrence Kubie in a penetrating article (5) has pointed out how such men have failed to make good in their careers because of unconscious emotional factors which prevented them from using their undeniably high level of "mental horsepower."

A type of man who might be termed the **Number 2 Man** is another variety of executive candidate whose performance is hard to size up correctly until he is actually placed in a position of top responsibility as the **Number One** man in his unit. The **Number 2 Man** is one who unconsciously needs to have someone above him to whom he can report. He may not have to call upon this superior very often, but it is absolutely essential for his emotional security to know that there is a man above him who will shoulder the final responsibility. Given such a superior, the **Number 2 Man** can turn in a top notch performance. Indeed, his outstanding efforts often earn him a promotion to the top position. There he often falls short of expectations. Sometimes his failure is not evident in a spectacular sense, but in the sense of not quite measuring up to what could reasonably be expected of a man with his ability. Once this kind of individual has demonstrated just enough lack of independent initiative to once more be returned to a **Number 2 Man** position, he happily resumes his former effective executive performance. It is obviously an expensive proposition to promote a **Number 2 Man** all the way up the line to the top spot, only to find at that point that he cannot handle this kind of responsibility. His failure penalizes the organization, other employees, and certainly his own emotional security.

Another type of executive candidate who possesses a great deal of latent potential, but who feels that it is up to the company to decide how it wants to use him, is often referred to as **The Sleeper**. Like a melon hanging ripe on the vine, such a man possesses a world of executive potential. Yet, until he is discovered by management and is given a series of challenges that will bring out his best, he may never reveal all of his talents. Often times management interprets the quiet

reserve of such a man as an indication that he does not have what it takes to rise. Consequently, there may be a fairly high percentage of executive candidates in American industry whose abilities are not likely to emerge into performance until management takes deliberate steps to encourage them to put these abilities to work on concrete tasks.

More Subtle Problems in Recognizing Executive Ability

Each of the different kinds of cases mentioned in the previous section poses a very real problem for those whose duty it is to recognize executive ability when they see it. Yet, there are still other complex situations in which accurate appraisal of an executive candidate is possibly even more difficult. Some of the most difficult of these situations arise when a man who has demonstrated previously outstanding executive performance begins to go sour, or declines in his ability to perform as he has in the past, without apparent cause.

In some instances, sudden and unexpected shifts in level of performance are due to external conditions. An executive may be shifted from a staff to a line position, for example, who is not temperamentally suited for the latter type of work. Or, he may get a new supervisor and be unable to work for this particular man as well as he was able to work for previous supervisors. Such outside causes of lowered performance can be corrected once they are properly recognized, by taking remedial action.

However, there are more subtle problems which are connected with an individual's personality which cause him to do less well than he is capable of doing. One such condition has been referred to as middle-aged depression. When some hard driving, achieving executives reach middle age, they abruptly realize that they are not going to attain the high goals which they set up for themselves in earlier dreams. Often this realization coincides with an awareness that they are no longer as physically vigorous as they once were. Their family grows up and is gone. All at once, they feel that they have somehow fallen short of their dreams and that consequently they are failures. Such middle-aged depressions are often rather quiet and undramatic in their effect on a man's surface behavior. Associates may not even notice that one of their energetic colleagues has gradually become a bit more quiet than he used to be, that he is almost somber at times, and that he has become reluctant to exercise the strong personal leadership which had previously characterized his work. They may not be aware of the depth and intensity of his inner feelings of depression. Yet, these inner feelings can pull down the depressed individual's performance. Fortunately, most executives recover spontaneously from such middle-aged depressions after a relatively short time, at least sufficiently to regain some of their former drive and capacity for business achievement.

"Len Wagner" is a case in point. In his early fifties, Len has earned an outstanding reputation as a technical man. He enjoys the confidence and esteem of his associates. He is a key man in the program of his corporation. For the past few years, he has been feeling increasingly depressed. His family is grown; the young-

est child is about to leave home. When he thinks of what he has accomplished in the light of his dreams as a young man thirty years ago, he begins to feel that he has failed. His feeling of having failed, of having been unable to measure up to the high goals which he set for himself, grow stronger. He begins to think of himself as being unworthy of the trust and confidence the company has placed in him. Particularly when he considers his own accomplishments in comparison with the memories of his father's accomplishments — which seemed so gigantic when he was a boy—he believes that he has fallen short.

As Len's inner discomfort increases, he begins to argue more frequently with his superior, the president of the corporation. Restlessly unhappy, he arranges things so that he gets a shift in assignments, hoping that a new challenge will snap him out of it. Neither Len nor his boss, the president, realize what is going on. In Len's case, he became aware that things were not as they should be. He then arranged for personal counseling which helped him regain his former confidence and sense of personal worth in a relatively short time.

"Joe Foster," in many respects an equally talented technical specialist, was not so fortunate. The president of a subsidiary of one of the top organizations in its field, Joe began to question the judgment of his associates and to disagree with them rather sharply on policy matters. After three years of increasing tension on both sides, the directors of the company asked Joe to resign. Within a few months, he went through a manic emotional stage of some proportions. This was followed by a deep spell of depression. Electro-shock therapy put him back on his feet after a few months. Later, he was able to resume active direction of another organization operating in the same industry. Few of his closest business associates had the faintest inkling about what happened to Joe. The outside world thought he had suffered a relapse after going back to work too soon while he was still recovering from a surgical operation.

Other forms of personality difficulty in men of executive calibre occasionally take a general schizoid trend. Some men who have been immersed in scientific and technical activities to the point where they either neglected or excluded close human ties with other people may tend to retreat increasingly in this direction when they suffer serious ruptures of their relationships with the few key people in their lives. "Tom Rockford" has this happen to him. He was a graduate of one of the country's top technical schools. He became a line executive and later a plant manager, having operating control over a large manufacturing plant. His only son was killed during World War II. This was a bitter blow to Tom. He buried his grief by redoubling his efforts to step up plant production. To do this, he spent more and more time on the job, leaving his wife more and more alone at home. Following several months in which he lived only for his work, his wife tired of the situation and left him for another man. With her departure, she took a goodly portion of Tom's life savings.

This double blow was too much for Tom's emotional equilibrium to withstand. In a short time, his behavior at the plant became noticeably disorganized, if not queer. He was no longer able to make the clear, sharp

decisions that had characterized his former executive performance. When conditions in the plant got rather bad because of his inability to cope with them, Tom resigned in a huff over a relatively minor incident. He had spent decades in the service of this particular organization. However, if he had not resigned, the corporation's management would have had to relieve him because he was no longer able to function adequately. The unfortunate thing is that neither Tom nor the company realized what was going on inside Tom. If they had, it might have been possible to restore him to his former effectiveness by psychotherapy.

Gradually Tom drifted from job to job. He still retained much of his former technical skill and know how. But he would begin a new job with much promise, only to soon start making clumsily inappropriate remarks, or to do things in such an eccentric way that he would either have to shift rapidly from assignment to assignment, or else run the risk of annoying and alienating serious-minded production executives with whom he worked. After some ten years of such wandering, Tom is still desperately striving to regain his former effectiveness. Though not so completely out of touch that he causes trouble, he has gradually gotten the reputation of being an "unpredictable character," a man who is not too comfortable to be around on the job. This reputation limits his effectiveness even though he still shows occasional flashes of his former brilliance. Unless, and until Tom gets adequate psychotherapy, he is apt to become gradually ineffectual, perhaps to the point where he will become totally unemployable.

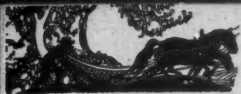
In each of the above cases, these men were doing a much better than average job until they encountered a life situation that was too difficult for them to cope with (6) (7). Until they "fell apart" so to speak, and were no longer able to perform executive functions with their former skill, their business and professional associates did not recognize that each man had serious personality problems which could cause him to falter under certain difficult conditions. While one cannot always predict that a given individual will run into a particular set of conditions in his career which could cause him to "break" in such a dramatic manner, we feel that it is now possible to predict with some certainty that a given executive candidate has such a precarious emotional balance that he might fail if he were placed under specific types of stress in a given assignment.

The Need to Predict Executive Ability

Regardless of how difficult the job may be, there are a number of situations in which American corporations must make judgments about their executives. These judgments are partially based on the type of executive function they expect each individual to perform a number of years later.

Selecting candidates to attend special courses is one kind of choice situation wherein recognition of executive ability is important. The "Arthur Chemical Company" wants to send twenty of its top executive trainees to a special version of the Advanced Management Program at the Harvard Business School. The men to be sent will be selected from a pool of six

(Continued on page 29)



Yesterday's Methods —are TODAY'S FAILURES

by Charles Waindl



Aldens'
Charles Waindl

INDUSTRY is currently placing a heavy emphasis upon the development of efficient work methods and processes. Because the acceptance of a product is generally dependent upon its utility, quality and price, the elements of labor and material must by necessity, be critically examined in their relation to economy of production. Despite the fact that highly complex machines have been developed to replace much of the manual labor, the fact remains that the majority of our national labor force is still employed doing considerable manual work.

Production objectives of the farm, factory and office, are, to a great extent, primarily controlled and performed by manual labor. As long as this condition obtains, we will still have the ever-present challenge to perform manual tasks easier and better. The manner in which these manual tasks are accomplished is commonly referred to as work methods, and the techniques by which they are analyzed for improvement are known by such terms as methods work, methods improvement, work simplification, motion study and others.

During the past half century, since the origin of the scientific management concept, there has evolved certain rules and techniques by which work methods may be objectively examined. When properly applied, these techniques present the work method in such a manner that improvements may be facilitated. The basic principle of scientific management is the thesis that an organized presentation of factual data will enhance the opportunity of a better method through an orderly approach to the problem. The process of work improvement follows a pattern similar to the six steps used in the scientific approach to any problem:

1. A clear statement of the problem
2. A collection of the facts and proper presentation
3. An analysis of the facts
4. The development of an improvement
5. Testing the improvement by application if possible
6. Revising if necessary, standardizing and putting the improvement into action

An essential pre-requisite to the practice is the approach to the problem with an open mind and a questioning attitude. The rules and techniques of work improvement are merely tools and can only be used to maximum advantage when accompanied by a sincere desire to improve. The degree of improvement is representative of attitude as well as skill and the biggest single obstacle to progress is an apathetic willingness to accept things as they are. Well-drawn charts or accurately described elements of the job will never develop a better method by themselves. It is only by an objective, open-minded, questioning-attitude approach, that the presented facts may be eventually shifted into a re-arrangement with resultant development of a better method.

Most of today's larger companies have a methods department within their organization. For the most part, these men are specialists in methods improvement, having backgrounds covering both academic training and practical experience. Although these men have the immediate and constant opportunity for application of improvement techniques, it does not necessarily follow that improvements can only be made by specialists. Most foremanship and supervisory development programs include an orientation on the principles and techniques of work improvement which have produced gratifying results. It is accepted that most people can learn these principles quickly and apply them usefully if properly stimulated.

AREAS OF APPLICATION

Obviously due to factory costs, consisting of labor and material, contributing the lion's share of production expense, the biggest volume of methods improvement work has been centered on factory operations. The expense, incurred in employing work improvement engineers and establishing programs in this field has been found to be fully justified. With American factory output the highest in the world today, and this tremendous production can be attributed, in a large measure, to the efficiency of labors' manual work methods and work habits. Credit for this gratifying condition can not be given any single group but is a combination of good management, engineering skill and skilled labor that has recognized, and accepted, work improvement as economic progress.

Today the field of office work is receiving considerable attention. Current ratios of office to factory worker indicate that the office field has not kept pace with the factory in improving work processes and work habits. The office operations of reading, reporting, translating, posting and filing,—as well as forms, equipment and procedures are being carefully screened for improvement possibilities. Manufacturers of office equipment are aware that the difference between the sale of their product, and that of a competitors, may often rest solely upon the advantage of an easier or more economical operator work motion pattern. The application of work improvement and motion economy principles is universally recognized as a necessary element for paying labor higher wages and producing a low-cost product.

HOW METHODS IMPROVEMENT WORKS

The process of work improvement follows four major steps:

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1. Collection of the facts and presentation
2. Questioning the facts
3. Developing a better method
4. Installing the new method

The initial phase is the orderly **collection of facts**. Since methods improvement is essentially based on questioning the efficiency of the present method, it is necessary that such collection and presentation be made with exactness and completeness. The first objective is to get an accurate, over-all picture of the present method or process.

Additional supplementary charts of individual operations are then prepared for closer inspection. The number and type of charts necessary vary according to the process but, basically, the principle follows that used in construction plans. Suppose, for example, that the process is one of receiving incoming material. The over-all flow chart would show the new material being unloaded from the freight car at the plant dock, loaded on some in-plant transporting equipment, moved to an elevator, up by elevator to the proper floor, off the elevator and moved to the receiving area, unloaded from the conveyance, opened by tools, contents removed and sorted, then counted and posted to a receiving form and eventually the material moved to a temporary location awaiting the next operation.

Looking at such a presentation, one would see the entire process laid out before him. In an example of this nature, it would be advantageous to prepare a flow diagram portraying location of operations, and the direction and distance of the moves.

A detailed breakdown of individual operations is also advisable. The method of opening the case and layout of the contents would appear to have methods improvement possibilities. Such an operation chart would detail individual steps, all handling required to open case, remove contents, sort and count for verification of quantity. The task of recording these elements is not difficult, but accuracy is important as these facts furnish the comparisons necessary for new methods development.

In charting these operations, four symbols are commonly used which are, in reality, a shorthand of engineering. They are: O operation—o Transportation—V Storage—□ Inspection. These symbols, when listed in the order that they occur with a brief supplementary description, tell the story of the process. We know that within any or all of these symbols are many unknown quantities that the chart does not detail, which necessitates more detailed secondary charts.

We know that an operation may be performed ineffectively, that the transportation of material to a work station may be too long, or wholly unnecessary, or the type of conveyance improper. We know that storage is costly, both the actual handling and the space occupied, and we know that inspection as such produces little to the ultimate utility of the product. Each and all elements represented by symbols have avenues of improvement. Now we come to the point where we seek to determine the weaknesses of the present methods.

The second step, commonly referred to as the **questioning phase**, is fundamentally the most important as a contributing factor to eventual improvement. In this step, everything about the job should be ques-

tioned and challenged, with the accepted five W's used as the basic tool. Ask: **What** is done and what is the purpose of the operation; **Why** is it done, what would happen if it were not done, and is every part of the job necessary; **Who** does the work and who could do it better; **Where** is the work done, and could it be done elsewhere; **How** is the work done, and does the sequence of motion pattern conform to the laws of motion economy.

This process of questioning everything about the job consists of examining the data, item by item and element by element to discover any weak points. Often such questioning leads to the discovery of unnecessary steps or delays, costly transportation, poor working conditions or improper manual motions. In general, these elements of the job which add little to value should be regarded with suspicion.

In the third procedure, that of **developing** the new method, the following four steps are tried:

1. **Eliminate** all unnecessary work, including operations, transportations, storage delays and inspection.
2. **Combine** operations and elements where possible. A storage suggests improper balance.
3. **Change** the sequence of operations. Look for evidence of backtracking that prevents a smooth flow.
4. **Simplify the necessary elements**. Further improve the accepted elements.

It is natural that the answers to many of these questions might occur during the initial phase. Now is the time to convert these and other ideas into action and to further improve them. The **development of the new method** phase is nothing more than making effective use of presented facts, a questioning attitude and ideas and is the logical step to improvement. It is not foreign to the over-all procedure, but merely an application of ideas that were born out of the preceding steps and an objective search for others. It seems that ideas come only when sought.

During this step the emphasis is placed on developing, improving and originating an easier and better way. One should not be discouraged by small modifications, because they do add up and several of them can result in a major improvement.

An improved layout, through a rearrangement of stock bins and other activities at a department at Aldens' has resulted in considerable savings as demonstrated on the charts shown.

MATERIAL FLOW CHART

Object(s): Department J Shoes—New Receipt
Range of Chart: From 5th floor Receiving to 5th Floor Stock
Company: Aldens Inc., 511 S. Paulina St. Chicago, Illinois
Charted by: Methods Section Staff
Method: Comparison. Chart Unit: 1 Lot. Location: All 5th Fl.

DISTANCE IN FEET		Symbol	Description of Activity
Old	New		
115	95	o	Truck loaded with shoe cartons pulled to Receiving (7H and 7I)
		O	Receiving
45	45	o	Entire lot to Examining
		O	Examining
245	105	o	Entire lot to Stock
		O	Stock
405	245		Total Feet Traveled
	160		Feet Traveled Savings = 39.5%

Installation Requirement

Install fluorescent artificial light for Examining and Repair
Enlarge fire door opening and install sliding 10' fire door as on 4th floor.
NOTE: Small circle denotes transportation; large circle, operation.

MATERIAL FLOW CHART

Object(s) Charted: Department J Shoes—Return Goods
Range of Chart: From 5th floor Receiving to 5th floor Stock
Company: Aldens, Inc., 511 S. Paulina, Chicago, Ill.
Charted by: Methods Section Staff
Method: Comparison. Chart: 1 Peg Truck. Location: All 5th Fl.

DISTANCE IN FEET		Symbol	Description of Activity
Old	New		
30	5	o	RG Peg truck pulled from 5th floor elevator 6K to condensing area
		O	Condense trucks
210	80	o	Service truck to reboxes and RG activity
		O	Reboxing and RG operation
90	5	o	Carried to sort area
		O	Sort and load
195	100	o	Pull truck to stock
		O	Place in stock
525	190	Total Feet Traveled	
	335	Feet traveled savings = 63.8%	

MATERIAL FLOW CHART

Object(s) charted: One Signout of Tickets
Range of Chart: From Centralized Signout to Bldg. Signout and Return.
Company: Aldens, Inc., 511 S. Paulina St., Chicago, Illinois
Charted by: Methods Section Staff
Method: Comparison. Chart Unit: Signout. Location: All 5th fl. Date: 11/16/49

All stock area has been relocated in Building A. Since the layout linear feet have remained unchanged, it is logical to state that order filling feet traveled will remain the same.

720' ODelivery of Section 56 tickets to Building B signout and return (360' ea. way) will be eliminated.

In order to centralize the stock area the following changes are necessary:

- 1) Remove tables from check and pinup stations and place temporary storage bins over belt.
- 2) Remove present schedule belt along south wall. This is not a necessity, however, as there are 9 bays of natural light available unused for future activity relocation.
- 3) Move record offices and buyers.

Advantages of New Layout

- 1) Savings of 720 feet traveled per signout.
- 2) Centralized personnel aiding supervision.
- 3) Flexibility of centralized signout, order filling and contact personnel.
- 4) Simplified handling of department J multiple item single orders.

In seeking to eliminate unnecessary work, advantage should be taken of time-saving devices. The ball point pen eliminates the necessity to blot. There are several economical methods of rapid reproduction available, which eliminate the necessity to repeat similar writings. Perhaps such a simple thing like carbon is all that is needed. Pre-positioned tools such as a fixed stapler will eliminate the costly hand element of selecting a pin from a container. Colors may be used to identify instead of handwritten postings.

In many instances combining operations is desirable. A shipping department may find it economical to combine assembly, packaging, and transportation billing into one operation. A major advantage of combining is that it eliminates or reduces the danger of improper balance of work loads between operations.

Changing the sequence of operations reduces backtracking and often speeds up the flow of work process. Delivery time to the consumer may be shortened or successive handlings may be eliminated. Multiple copies of orders enable the order to be filled and prepared for shipment, while the paperwork is handled separately. Can bulky or fragile items be packaged ahead of time instead of at the time of shipment?

In seeking to simplify the necessary elements, the direction of attention should be focused on detail. Each minute portion of each operation should be examined very closely. Again the who, why, where, what and how line of questioning should be used. Everything about the product, equipment, working conditions and motions of the operator should be considered. Does the product vary in grade and quality? Could it be redesigned to increase production? What is the percentage of scrap? Can the excessive material be used over? Are inspection requirements of the finished product proper and standardized? Of equipment; are machines, tools, hand jigs, fixtures, and work benches conducive to good work habits? Can drop deliveries or conveyors be used to advantage? Of working conditions; is the work located close by? Is it in proper routing sequence? Are tools pre-positioned? Is the area of work adequately lighted, ventilated, clean and are safety conditions adequate for operators and equipment? And there are literally hundreds of other questions one might ask.

Finally the operator motions are subjected to close examination and analysis. Motion study is one of the techniques of work simplification. Inevitably a detailed study of motions will disclose improvement possibilities. Savings in time of 30 to 40% are not uncommon on the first attempt as there is invariably a better way. There is a lot of truth in the old adage, anent progress, "When you're through improving, you're through."

Frank Gilbreth, a pioneer of motion study, once said, "There is no waste of any kind in the world that equals the waste of needless, ill-directed and ineffective motions. There is no industrial opportunity that offers a richer reward than the transformation of ill-directed and ineffective motions into efficient activity."

It was Gilbreth, and later others, who developed and refined a set of laws and principles of motion economy which assist in eliminating needless motions and developing better motion patterns. They are: both hands should begin their motions at the same time; both hands should complete their motions at the same time; both hands should not be idle at the same time except during rest periods. Motions of the arms should be balanced, either in the same or opposite directions and should move at the same time. Motions of the lowest classification (finger being the lowest, wrist, forearm, shoulder) require correspondingly less time. Adherence to these laws of motion economy is fundamental. The effectiveness of any motion improvement can be measured by the degree to which these laws are approached.

The purpose of motion study is to analyze motions used in the performance of a task, in order to find a more economical way of doing it. This entails a systematic analysis to eliminate all unnecessary motions and arrange the remaining motions in the best sequence. A right-hand-left hand chart (RH-LH) serves to illustrate what each hand is doing at the same time. It is a valuable aid in developing better motion patterns and is a good device for the training of new operators. Again, these two commonly used symbols are the large circle (O) for operation and the small circle (o) transportation.

In a study of the following chart, one does not have to be familiar with the operation to recognize its patent inefficiency. It is a disassembly pinned together media.

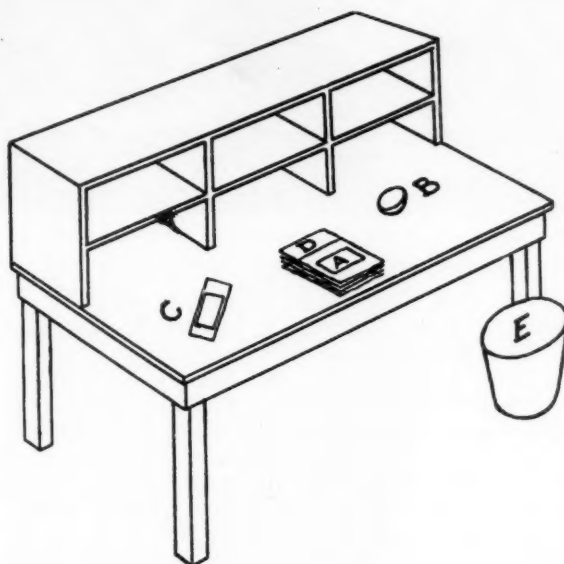


DEPARTMENT: Return Goods
OPERATION: Unpin label, jacket & tickets from order

LEFT HAND	PRESENT METHOD	RIGHT HAND
Move hand to orders "A"	○	○ Grasp pin in label "C"
Grasp order	○	○ Remove pin from label
Move order to position "B"	○	○ Move pin to container "D" & release
		○ Return empty
		○ Grasp label "C"
		○ Move label to position at "F"
		○ Return empty
		○ Grasp pin in jacket "G"
		○ Remove pin from jacket & tickets
		○ Move pin to container & release
		○ Return empty
		○ Grasp jacket "G"
		○ Move jacket to top of label at "F" & release
		○ Return empty
		○ Grasp tickets & look for omissions & pull out
		○ Move tickets to top of jacket
		○ Return empty
		○ Grasp order "B" & omissions
		○ Move order & omissions to waste-basket "S"
		○ Return empty
		20 Individual operations w/ Right Hand
3 Individual operations w/ Left Hand		
Total of 23 operations		

In this example we see a violation of several of the laws of motion economy. The left hand is holding while the right hand performs all the work. It seems ridiculous that such an obviously poor method should occur, let alone continue for any length of time, yet it is quite prevalent. A simple re-adjustment of the work place layout, permitted the present, improved method shown.

The last step of the improving method process is putting the newly developed method into practice. It is readily apparent that the best work simplification plan or improvement ideas are costly by themselves if they are not put into effect. Those persons charged with the responsibility of inaugurating production economy should be given sufficient authority to put the



DEPARTMENT: Return Goods
OPERATION: Unpin label, jacket & tickets from order

LEFT HAND	PROPOSED METHOD	RIGHT HAND
Grasp label "A"	○	○ Grasp pin in label "A"
Hold label	○	○ Remove pin from label
Move label to position "C"	○	○ Move pin to container "B" & release
Return empty	○	○ Return empty
Grasp jacket "D"	○	○ Grasp pin in jacket "D"
Hold jacket	○	○ Remove pin from jacket
Move jacket to position "C"	○	○ Move pin to container & release
Return empty	○	○ Return empty
Grasp tickets at "D"	○	○ Look for omissions & pull out
Move tickets to position "C"	○	○ Move order & omissions to waste-basket "E"
Return empty	○	○ Return empty
	9 Simultaneous operations	
	2 Individual operations w/ Right Hand	
	Total of 11 operations	

ideas into action. Although there is always a natural resistance to change, an atmosphere of cooperation and a standardized procedure, with a minimum of formalities, will expedite the installation. Finally, line and staff personnel should be accountable for its proper and continued practice.

CONCLUSION

The purpose of this article has been to serve merely as an orientation into the broader field of industrial engineering for economy of production. No end of fine texts are available, covering the subject of work simplification through many forms of charting, that will assist in uncovering uneconomical operations, processes and motion patterns. A complete study of motions includes the study of all members of the body, and standardized rules govern their use in relation to work place layout. There are some thirteen known methods of arriving at a time to perform a manual task without the use of a watch. Each of these systems requires careful attention to motions. By the manner of their usage they require the observer to identify all motions and elements and the recording can then be used to improve the method.

Operations are efficient only to the degree that each motion is economical and effective. Objective work simplification will result in better methods. An overall study will reveal bottlenecks where none now is
(Continued on page 20)

CUTTING COSTS in Munitions Transportation

By W. J. Burns

American Trucking
Associations'
W. J. Burns

Fabian Bachrach Photo

ALTHOUGH explosives were moved by truck as early as 1911, the transportation of military munitions by commercial motor carriers is a relatively new class of transportation—a class that provides a combination of safety and savings to the military departments.

It was World War II that provided the impetus for this type of transportation, and although the percentage was small as compared with the tonnage moved by rail, the truck proved its ability to play an increasingly larger role in the war effort. It must be remembered that during the war years the motor carrier industry was hampered by an acute shortage of rubber and other critical materials. Few trucks could be produced for commercial motor carriers, and the unprecedented munitions traffic for the military had to be carried, therefore, in a diminishing supply of vehicles.

The military departments were quick to recognize the achievements of the trucking industry during the war, however, and wider utilization of trucks to transport munitions during the post war period was encouraged.

During the Korean war larger tonnages were shipped by truck than in any of the preceding years, including those of World War II. And it is significant to note that while several billion pounds of munitions have been moved by the military departments since the end of World War II, there have been no fatalities attributed to an explosion in any of these vehicles.

In any discussion involving the transportation of munitions, safety, of course, should remain paramount and costs secondary. Assuming, however, that each of the various modes of transportation is equipped and able to safely transport munitions, consideration must then be given to over-all costs, and the part it plays in the selection of a carrier.

Prior to arriving at the choice of a motor carrier, it would be perfectly logical to ask what advantages exist in the utilization of truck transportation? The answer to this question is to be found in the flexibility of the motor truck—its ability to safely and efficiently transport munitions from the origin installation to the igloo or magazine at destination without transshipment of the cargo at any time enroute. It is in this area that truck transportation is able to provide substantial savings for the military departments.

The term *over-all costs* as used here is intended to include, in addition to the rate, the costs incurred for the services of fork lift operators, munitions handlers, supervisors and foremen, as well as the costs for military tractors, trailers, fork lift equipment and blocking and bracing materials. One military installation estimates there is a saving in labor costs alone of 23 percent in favor of truck shipments as compared with rail.

To understand how this saving is realized, it must be recognized that many military installations throughout the country have igloos which are served *only by truck*; in fact, at one of the largest, 97 per cent of the igloos are served by truck and only 3 percent by rail. On shipments arriving by rail at this installation, therefore, it is necessary to off-load the munitions from the rail car and reload, block and brace in military motor equipment—an action which might require the services of a foreman, supervisor, four or five munitions handlers, fork lift operators and truck driver, in addition to the fork lift truck, tractor and trailer. The shipment must then be moved up to a half mile to the igloo where the ammunition is again off-loaded. Since the majority of these costs are incurred by the military, it can be readily seen that substantial savings are available if the shipments are moved directly to the igloos by truck.

Another item of savings may be found in the blocking and bracing of munitions. It is generally agreed that rail shipments are subject to impacts of a more severe nature than encountered in trucks, requiring more dunnage to insure safe transportation. For example, in *Freight Traffic Management at Installations of the Military Departments*, it is stated that if a rail car loaded with packages of explosives, moving at a rate of five miles per hour, should bump a solid train with loaded cars, the packages may be subjected to a pressure as high as five times the total weight of the packages involved. These pressures are seldom encountered in truck shipments, and the dunnaging is therefore not as heavy. Furthermore, the majority of motor carriers do not charge the military for dunnage, whereas the railroads bill the military at the explosives rate for all dunnage in excess of five hundred pounds.

To illustrate the possibility of savings in blocking and bracing, we can refer to a hypothetical shipment of ammunition from the Naval Ammunition Depot at Hawthorne, Nevada, to the Naval Ammunition Depot at Earle, New Jersey. For a carload shipments of bombs to Earle, the dunnage might easily amount to 1,500 pounds—1,000 pounds over the free allowance. This excess dunnage would have to be paid for at the explosives rate of \$7.49½ per cwt.—or \$74.95 for just transporting the lumber. Since motor carriers do not as a rule charge the military for dunnage, the \$74.95 could be saved on shipments by truck.

That the military departments are aware of the advantages of motor truck flexibility and the savings

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**Easy Washing
Machine Corporation's
Richard L. Donoghue**

Purchase the *Easy Way*

Getting 100 Cents Worth of Value for Each Dollar Spent

by Richard L. Donoghue

A WISE man, of sorts, once said that earning money and saving it, are equally difficult. The management of Easy Washing Machine Corporation is charged, by the owners of the business, with each of these tasks and the responsibilities are, in turn, delegated to the department heads of the Corporation. Our company's prosperity is dependent upon how well these responsibilities are executed and, because of unexcelled executive ability, our management is an assurance to the owners, of a return on their investment. The equally formidable task of saving or conserving money, after we get it, does not lend itself to a simple management formula, and yet it must be accomplished.

Management is occupied by long hours of deliberation on this latter phase of the business, and many practical safeguards, against the inefficient use of the corporation's money, have been instituted. The singular feature of saving, or conserving, money in a manufacturing business is, that it must be accomplished while regular production rates are maintained and, due to this fact, the officers of Easy Washing Machine Corporation look to every individual in the company to be cost-conscious.

Within the scope of this management conservation, or money-saving expectation, the Purchasing Department assumes a great responsibility because it spends over half of the net sales dollar each year. With management literally turning over the pocketbook of the corporation to the purchasing department, it has every right to expect all purchasing expenditures to be guided by maximum efficiency.

Our president, Mr. W. Homer Reeve, stopped into my office one morning and said "Donoghue, do you think you are as good as Ivory Soap?" This, not unusual, type of puzzler from our president has a sharpening effect on all of us, and, after scratching my head awhile, I said, "Well, Mr. Reeve, you certainly have me cornered now." His query was soon clarified when he went on to say that Ivory was purportedly 99-44/100% pure, and he wanted to know if our purchasing efficiency was as good. I had to admit that this percentage of perfection was our goal, but that I did not think we had achieved such a high "batting average," despite our excellent crew of purchasing agents. As he withdrew from the office, he said, "Donoghue, for every one per cent of inefficiency in our purchasing dollar expenditures, using our 1953 financial statement to go on, we are about \$100,000 off course for the year."

This statement was certainly thought-provoking—supposing we were only 90% efficient!! In my college days, 90% was a pretty fair grade which was sure

to be paraded before the folks in my next letter home. Nothing short of perfection is a justifiable objective in purchasing, simply because it costs too much to be inefficient. This is the sound approach of management and the Purchasing Department staff at Easy Washing Machine Corporation, when we are making purchases for our civilian production of home laundry equipment, or for the defense production of the Armed Forces.

Any price index will bear out the fact that prices are high, and to add inefficiency to present day purchase prices, is the equivalent of business suicide. Inefficiency in purchasing is a frightening reflection, particularly when a company, like ours, is spending several million dollars each year. When we say that we purchase the EASY way, the implication is not that we can buy an article below the vendor's selling price, but that we are efficient in our expenditures. Occasionally, a price may be reduced by the vendor, or offered to us for less by a potential supplier but, in the main, all vendors are confronted with essentially fixed manufacturing costs.

This means that the principle increments of the vendors costs are fixed and beyond his control. For example, his steel was just increased in price, his labor contract was probably renewed after he gave five cents an hour increase to his men and his inbound and outbound transportation expenses are at an all-time-high. Of course, our vendors are refining their costs to produce and we expect this efficiency to be reflected ultimately in our purchase prices. Nevertheless, these conditions exist generally, with respect to high increments of cost, and our job as purchasing agents is to hasten the time when our purchase prices can be reduced. An involved task, I will endeavor to describe the unusual and unique work habits that we employ to accomplish this objective and will pass over the usual and routine.

Comprised of myself and four purchasing agents, our purchasing organization procures all of our company's needs for raw material, finished and semi-finished components, tools and machinery, maintenance and operating supplies. Four follow-up clerks do all the expediting of shipping schedules on our purchase orders and a coordinator of defense procurement performs a multiplicity of administrative tasks peculiar to defense commitments. The usual roster of secretaries and filing clerks completes the organization structure of the department.

The department is located in our main office in Syracuse, near the office of our president, to whom I report directly. Having a private office, each purchasing agent is enabled to efficiently interview vendors' representatives, and our own engineering and manufacturing people. Supplied with adequate space, office equipment and services, we also have a Conference Room for group meetings, and conferences of EASY and vendor personnel. In addition to regular office

equipment, we have special, locked Kardex files containing records of vendor-performance on defense commitments. Locked compartments are maintained for defense purchase orders and supplements, correspondence and drawings and the same practice is required of other departments receiving copies of defense purchase orders and supplements. Reports of Test, and records of returned articles to vendors, on our defense programs, are similarly protected in the Purchasing Department.

Each of our purchasing agents, fully responsible for a group of items assigned to him to buy, is authorized to commit the company—and is required to sign the purchase commitments that he negotiates and our vendors understand this organizational setup. Responsibility is fixed, for every purchase, on a particular purchasing agent and the scope of this responsibility includes that of obtaining delivery on time to our Receiving Inspection Department, as well as the successful meeting of our inspection standards. We have met our responsibility, in this respect, when our procurement is accepted by our Receiving Inspector, who inspects the material or article to the purchase order on which it was bought.

We extend the policy of holding the purchasing agent responsible, into our Follow-up and Expediting functions and when our regular efforts to expedite delivery are unsuccessful, the purchasing agent steps into the picture to see if he can prevail on the vendor to ship the delinquent lot or lots. This effort to persuade the vendor to expedite the shipment and to ensure the continued operation of our own assembly-lines, might include a trip by our purchasing agent to the vendor's plant. This extra burden falls on our purchasing agent, and the psychology is, that too much trouble of this kind will cause the purchasing agent to look around for a better source of supply. As EASY has had but one assembly-line shutdown, since 1947, it seems that our policy of fixing purchasing responsibility is a realistic one. We credit our Production Planning Department, of course, with observing vendors' lead times, when they give us their production requirements.

As the immortal football coach Knute K. Rockne, back in 1927, said to me on the famous playing field at Notre Dame, "Attention to details will pull you out of the crowd." I find that this rule applies in purchasing as well as in football, and is particularly true of EASY's follow-up and expediting work, that exactness pays off. Our follow-up section tries to take nothing for granted, when expediting deliveries. They know it is easier to keep ahead of their day's work, than it is to fall behind and catch up later on and that the penalty for falling behind is the seeing of that mythical bogeyman "Plant Shutdown." This is a most repulsive apparition, when you are dealing with some 1400 odd suppliers, any one of whom can shut us down if they become delinquent.

I often liken, for my own edification, the similarity from a procurement viewpoint, between recovering from a plant shutdown, and a stunned boxer getting up off the floor after a staggering hook or jab has flattened him. I claim it is easier "to stay one one's feet" in purchasing, than it is to recover one's composure and physical stamina after a knockdown or plant shut-

down. Just as the whole body of the boxer is shaken and temporarily immobilized by a knockout blow, so too, is the whole fabric of one's delivery schedules on all purchase commitments weakened by lackadaisical follow-up and expediting practices. It is not long before the most critical and long lead time articles are hopelessly behind schedule. Our staff will literally scratch dirt to prevent falling behind in this fatal way.

I have been describing, up until now, our general approach to purchasing the EASY way. Now, I want to give the readers of "Armed Forces Management" a closeup view of how the Corporation goes about its business of conserving money, by getting 100 cents worth of value for each dollar spent.

Our Purchasing Department purchases on the authority of a requisition which is supplied to us by an authorized requisitioner outside the department. This requisition is complete, and it describes accurately the material or article wanted, the rate of delivery and point of delivery at the plant. Raw material requisitions are accompanied by an EASY Material Specification and a blue print of the part to be made. Semi-finished parts requisitions have either foundry prints or finished part prints attached to them. In like manner, requisitions for tools, machinery, maintenance and operating supplies are properly specified to us.

Considering that EASY manufactures several products in the home laundry equipment field, and a number of defense articles also, one can visualize that quantities of requisitions, by programs, come to us regularly. This understanding is important, because our purchasing activities are continuous, and much individual initiative on the part of the purchasing agent is required to keep all phases of a procurement program in step with our manufacturing plans, as well as to advance all programs simultaneously. It can also be seen that we do not differentiate between the quality of our purchasing, which is employed for our civilian products as well as for our defense products. A purchasing agent cannot change his purchasing habits, so as to favor one kind of procurement and to neglect another. In our case, high purchasing standards are employed for both civilian and defense manufacturing purposes.

Also, at this juncture, it can be said that the purchasing agents are made aware of impending manufacturing programs as a result of procuring experimental materials or parts for our Development Engineering Department, or by formal announcement from our management. This advance knowledge, enables us to start our search for sound suppliers. We are also able to glean knowledge of the future by the nature of the tool, machinery and gage procurement programs: that knowledge, incidentally, pertains to what we will manufacture in our plant and usually raw material and castings are the purchased items involved. We gradually acquire our informal understanding from our Manufacturing Department of the "make or buy" policy, to apply to a given manufacturing program, after which we can act as we see fit when interviewing sales representatives of vendors, or potential suppliers. We need ammunition to stimulate the interest of the commercial people who are regularly soliciting us for business, and we get some of this advance

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Bell and Howell's
Frank D. Ryan

Every Job Can Be Improved!

—If Work Simplification Principles Are Applied

By Frank D. Ryan

THIS principle was pounded home to Bell & Howell executives and supervisors during their course of training in Work Simplification.

Some jobs may not be worth the effort to improve—and the measuring stick recommended is man hours and pay dollars spent per year. A job which occurs perhaps only once a year and on which a total of ten man hours is spent, with no material cost, is obviously worth practically no time and effort to improve.

But a job requiring a thousand man hours or more a year, or the equivalent value in material, is worth considerable study. It has been said that in today's fast changing world, any job in an industrial establishment which has been run the same way for more than two years is out of date and should be revised.

However, as the training program pointed out, the first thing to do before studying an operation for purposes of improving it, is to consult with those responsible for the activity involved. The basic human traits of resistance to change and resentment of criticism must be considered. As has been pointed out, "You can tell 'em, you can sell 'em, you can consult with 'em." When the individuals directly involved with an operation have complete confidence in the methods investigator, when they are at all times informed of what he is trying to do, and feel that they have a personal part in the improvement, then and only then will they give wholehearted cooperation to the new procedure. This basic human relations principle has been expounded by Allen Mogensen for the past twenty-five years.

After a job has been selected for study, and due consideration given to the human relations involved, the next step is to get the facts about the operation as it is now performed. The basic tool of Work Simplification, Bell & Howell executives were told, is the flow process chart. The flow process chart is essentially a progressive step-by-step breakdown of the operation. The flow process chart is a remarkable tool. It may be used on any kind of work, manual or administrative, and may have as its subject the material (piece part, assembly or finished unit in a manufacturing operation, for instance), the paper form (correspondence, purchase order or receiving ticket, for example), or the individual doing the job (sweeper, operator or president).

A more dynamic counterpart of this basic tool of Work Simplification is the motion picture study. In the same way the chart records the breakdown of steps in any operation, the motion picture camera can, with infinitely more detail, record this same breakdown. The equipment needed is a 16 mm. camera, mounted with a double light bar, on a light-weight

tripod. Although black and white film, with substantial exposure latitude, can be used, a light meter is also recommended. The motion picture study is so effective that it must be handled with care. *Invariably*, with the first showing, poor methods and practices will show up. The eye of the camera is merciless and will enable even the operator himself to see things which had never been apparent before. Accordingly, the study pictures should never be shown to anyone other than those responsible for the operation. Herbert Goodwin of M.I.T. has stated that a simple and effective way to improve a method is to call together the men connected with an operation, show them a movie of it and then sit back and wait for ideas. Professor Goodwin states that it is unnecessary to ask for improvements—they will be provided spontaneously. After the improvements are installed and an "after" film is taken, the film may then be shown generally in the organization, particularly if credit is given to those responsible for the operation.

After recording the breakdown of the operation, the next step is to classify it into inspections, storages, delays, transports and operations. Here the A.S.M.E. standard symbols are used but the important thing is for the executive or technical man to be able, probably unconsciously, in his own mind, to make the distinction. Our program was not intended to make industrial engineers of all our supervisors, but to increase their analytical ability.

After completing the above classification, the operations themselves were considered to determine which were the "do" operations. For instance, in manufacturing piece parts, the actual change in shape or finish of the part is a "do" operation, while in the office area, the typing of a letter or the filling out of a form would be examples of "do" operations.

At this point our men were instructed to minimize effort by attempting to secure the greatest gain immediately. In other words, the question, "Is it necessary?" is applied to the "do" operation. In a surprising number of cases, the "do" operation is found to be unnecessary, and is therefore eliminated, and all the attendant make-ready and put-away effort is of course also eliminated.

For instance, at one time we had two optical condenser assemblies for our 16 mm. projector which could not be distinguished one from another, by visual examination. For our customer's convenience, we put a daub of red paint on one condenser assembly. The design was changed to eliminate the other condenser assembly, but somehow the manufacturing process continued to call for the daub of red paint. For ten years, every 16 mm. projector made by Bell & Howell had an optical condenser assembly with an unnecessary daub of red paint! Every reader who is a member of an organization of any size will, if he searches, find a number of such examples in his own backyard.

After questioning the "do" operations, our men were

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WASHINGTON, D. C.

taught to question every detail of other operations, in order to work out a better method.

Before applying the new method, our men were taught to consult with the individuals involved. Tom Nelson made the statement, "No one should be ignored on those things on which *he thinks* he has a right to be consulted." Our men were taught that although the application of this principle may appear to slow up progress in methods improvement, in reality, in the long run, the individual who applies the principle will find his work greatly expedited by the whole-hearted cooperation he will receive.

In addition to the flow process chart which follows a single procedure, work distribution charting was also taught. This chart method is in effect a correlation chart of personnel and activities. It consists essentially of a list of activities vertically down the left-hand side of the chart, and a list of personnel across the top.

Each person's duties are listed opposite the appropriate activity, together with the man hours spent per week. With the aid of this chart, it becomes relatively simple to more appropriately parcel out duties.

Again, this paper form chart method has its counterpart in the photographic field. Many years ago, Marvin G. Mundel developed the lapse time technique using a motion picture camera, since popularly known as Memo Motion. In this use of the motion picture camera, by means of a simple intervalometer, instead of the normal 16 frames per second speed, individual

exposures are made at much greater time intervals. One frame every 4 seconds is frequently used since this permits a full 8-hour day to be recorded on a single 100 ft. roll of film. This permits the industrial engineer to simply load and start the camera at the beginning of the day and return at the end of the day to unload the roll of film.

Just recently, industry is beginning to become aware of the value of this new tool for studying group work (like the work distribution chart). Glen Wolfe of the A. O. Smith Corporation, in a recent talk before the Chicago section of the Industrial Management Society, showed memo motion films taken of a group of workers in a large welding shop. Mr. Wolfe used no lights since the combination of Super XX film, f/1.5 lens and slow shutter speed (characteristic of motion picture cameras in single frame usage) permitted sufficient exposure.

As Mr. Wolfe pointed out, this film was run on a time and motion study projector at varying speeds and single frames were projected as long as desired for study. Managers are finding that when group operations are studied in this way, possible improvements become immediately evident.

The suitable application of the flow process chart, the motion picture study, the work distribution chart or memo motion study, is guaranteed to bring lasting dividends in improved methods if the emotions and feelings of those involved are given thoughtful consideration by management.

Secretary of Defense—On Management

(Continued from page 5)

requirements include both trained personnel and plans for quickly training others, both stockpiled materiel and capacity to quickly achieve mass production of great quantities of all military products required. We are also carefully and continuously examining the gearing together of all components and the balanced build-up of all requirements.

Economy in operation is likewise receiving the day to day and month to month attention of all of us. The Defense team, both military and civilian, is working hard to improve the organization, procedures and methods of the whole Defense Establishment and to stir up greater interest in these objectives farther down in the organization. Much progress has already been made. The Office of the Secretary of Defense has been reorganized and the administrative structures of the three Military Departments are being carefully examined with the purpose of simplifying them and making them more flexible, responsive, effective, and efficient. All of these efforts are helping to achieve every intelligent economy that can be realized through improved management and administration in the better control of men, materiel, and money.

More Than Half

With more than half of the world's trucks and trailers, the United States has 10,000,000 of these vehicles which provide direct employment for six million workers; pay one and one-half billion yearly in highway taxes; use 10,000,000,000 gallons of gasoline each year; purchase 622,000,000 quarts of oil in 12 months; use 9,850,000 gallons of anti-freeze each winter, and haul 182 billion ton miles per year.

Yesterday's Methods

(Continued from page 15)

known to exist. New tools, systems, and machines are available to eliminate, combine and simplify production methods. A profitable work simplification, or methods improvement program, should be extended right down to the man who is doing the basic work, for he is the man who probably knows more about the job than anyone else,—but he is also unlikely to suggest improvement unless properly trained and motivated. This is borne out by varying results of methods improvement awards, through industrial suggestion systems, where total savings reported vary from 15 to 50%.

Within Aldens, Inc., every executive and supervisor has had 60 hours of formal methods improvement and work simplification training. On the job training is a continual practice. In addition, all have had an orientation into one of the better known commercial methods of establishing time standards, that use visual observation of motion and recording as their basis. A methods department of 8 staff engineers conducts methods improvement surveys, and administers an effective wage incentive program that covers 83% of direct production time card hours. We conservatively estimate that the combined systems save 35% of direct labor production costs.

Today, many are doing unnecessary work and many others are performing ineffectively. Human effort of this type is waste and failure to reduce this waste cannot be justified. Yesterday's methods are today's failures.

A Business Look

at the

ARMY

by

Paul L. Davies

*Findings of A
Thorough and
Objective Inves-
tigation By Leading
Business Men*

WHEN the President submitted proposals to Congress for reorganizing the Department of Defense, in April 1953, he commented: "Other improvements are badly needed in the Departments of the Army, the Navy, and the Air Force." And he reported that the Secretary of Defense was initiating studies of the internal organization of the military departments. In substance, the President was saying: "Now that we have tidied up the penthouse, we must insure that the foundations of the Pentagon are in order."

The Army took the lead. On August 24, Robert T. Stevens, Secretary of the Army, appointed an Advisory Committee on Army Organization. It was composed of four civilians and one officer: Harold Boeschstein, President Owens-Corning Fiberglas Corporation, Toledo, Ohio; Irvin A. Duffy, Vice President, Ford Motor Company, Dearborn, Michigan; C. Jared Ingersoll, Board Chairman, Kansas, Oklahoma and Gulf Railway Company, Philadelphia, Pennsylvania; Lieutenant General Lyman L. Lemnitzer, Deputy Chief of Staff of the Army; and the writer (President, Food Machinery and Chemical Corporation, San Jose, California) as chairman.

The committee took its assignment seriously. Between September 18 and January 5, 1954, its members spent substantially half of their time in the Pentagon. They held hearings on 28 days, listened to and questioned 129 witnesses, and examined reams of material assembled for consideration by their staff, which consisted of four members of the firm of McKinsey & Company, management consultants, and a competent group of Army officers. Subsequently they drew up a detailed report with concrete proposals and recommendations.

That report and the discussion it stimulated highlight five basic problems which must be faced up to in each military department:

❑ What is the role of the secretary of a military department in the Department of Defense as it is developing?

❑ How shall the secretary of a military department delegate his authority among civilian and military subordinates?

❑ What is required to insure effective civilian control?

❑ How can the secretary best organize his department to develop, train, and maintain an Army ready for war, and simultaneously see to the procuring, storing, supplying, and warehousing of the vast quantities of materiel needed?

❑ Does the department's organization fix responsibility and establish lines of accountability so clear as to insure effective performance and responsible management?

Role of the Secretary

There were those who argued in 1947, when the De-

partment of Defense was organized, that the jobs of secretary of each military department should be abandoned. Congress decided otherwise. It made clear its desire that each military department be maintained as a separate and relatively autonomous unit and that each secretary, while wholly responsible to the Secretary of Defense, be held fully responsible for the affairs of his own department. Thus, the Army Organization Act of 1950 clearly makes the Secretary of the Army responsible for all Army affairs, for everything done in his department.

In 1953, again, the Rockefeller Committee—appointed by Secretary of Defense Wilson, to recommend changes in the basic organization and procedures of the Department of Defense—recommended that authority for military operations should be decentralized. The President stated his approval and the Secretary of Defense avowed his intention of delegating authority to the secretaries of the military departments.

Need for Authority

There is no doubt about the good intentions of decentralizing responsibility among the three departments, but the Advisory Committee on Army Organization, after studying the Army's operations, soon became concerned with the question: Has the Secretary of the Army adequate authority to manage the Army's far-flung operations? Is his formal authority reinforced by the opportunity to participate in the development of the basic policies and decisions that determine how the more than 2 million persons that make up the Army establishment and expenditures approximating \$10 billion to \$15 billion a year shall be utilized?

The Secretary of the Army is in effect the president of a major subsidiary of a huge enterprise subject at all times to the direction of the president of the parent company. In this instance, his responsibility encompasses a great variety of military judgments affecting human lives as well as vast procurement, supply, and financial tasks. At stake is the ability of the armed services to respond quickly to the leadership of the Secretary of Defense (such response will have to be quicker in future emergencies than was ever necessary before) and to operate efficiently within the policies and day-to-day guidance of the Department of Defense.

But our committee found that, unlike his industrial analogue, the president of this major subsidiary was not often permitted to participate in the discussions of the board of directors and the top management—

i.e., the National Security Council and the Secretary and Deputy Secretary of Defense—by whom policies affecting his enterprise were considered and determined.

Hence, the committee urged that the three secretaries of the military departments—for the same problem applies to the Navy and Air Force too—be invited regularly to sit in, as observers, at meetings of the National Security Council, and that they participate actively with the Secretary and Deputy Secretary of Defense in the formulation of basic defense policies. It is sound and prevailing business practice to make sure that principal operating executives participate fully in the determination of basic policies; if the military secretaries are to be the responsible executives of their departments, that same practice is essential.

Dilution and By-Passing

Our committee also became concerned about another question. The real authority of the Secretary of the Army to run his department depends in part on the role that is played by nine Assistant Secretaries of Defense, whose positions were established in early 1953. Was there danger, as some feared, that these assistant secretaries would become, in effect, operating officials in circumventing the authority of the secretary of each military department? (The same query applies to the general counsel of the Department of Defense, likewise a new position in 1953.)

The committee was assured that the Secretary of Defense intends to limit the activities of his assistant secretaries to policy formulation and to assisting him in managing the Department of Defense. It was em-

phasized that the assistant secretaries are not in the direct command line from the Secretary and Deputy Secretary of Defense to the military secretaries, and that the only channel for issuing instructions is from those two officials to the Secretary of the Army.

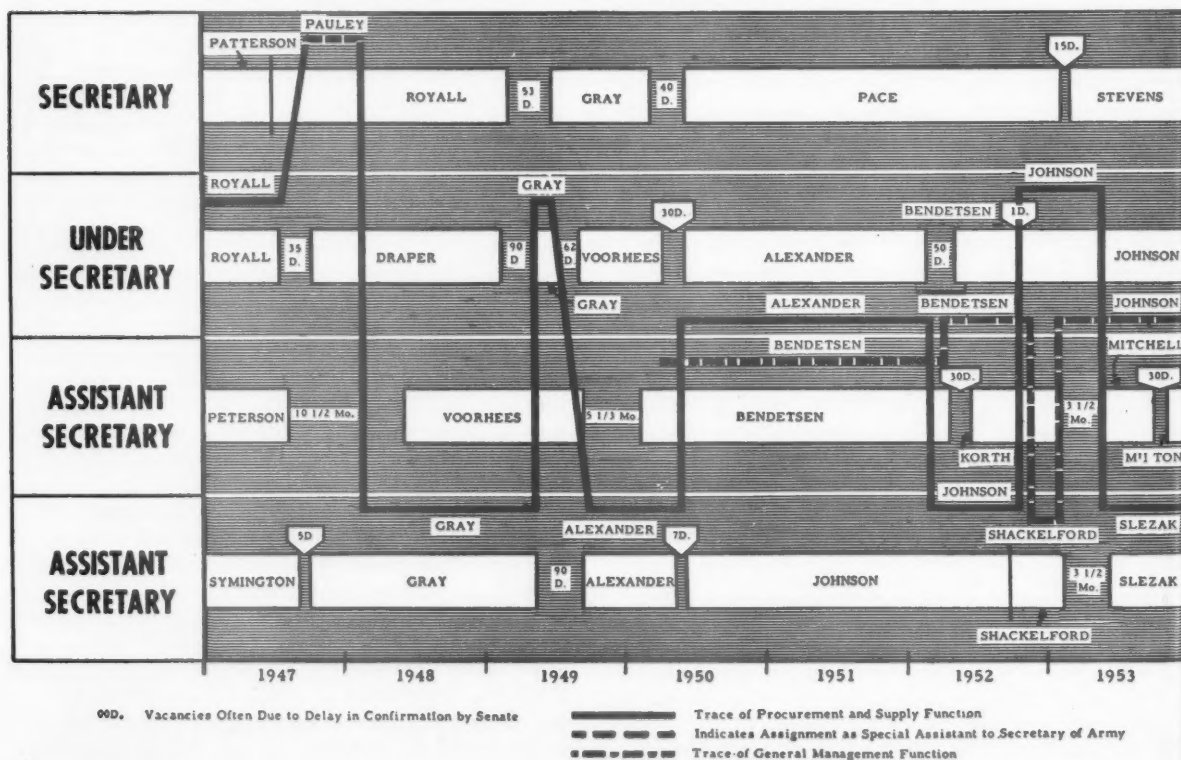
However, in a number of instances the committee observed that this was not strictly the case. Active, able men in the assistant-secretary posts issued orders to officials throughout the Army directly and without regard to the Secretary of the Army. The latter could minimize the difficulty by designating one of his assistant secretaries to work with each Assistant Secretary of Defense, but such an organizational device cannot substitute for full acceptance, in day-to-day practice, of the principle that responsibility for broad policies rests with the Secretary of Defense and responsibility for Army operations with the Secretary of the Army. No secretary can be held accountable for "all the affairs of the Army" if his authority over the Army is diluted and by-passed.

Hence, the committee recommended that the Secretary of Defense insure that the authority of the Secretary of the Army be respected by those above as well as those below.

Problem of Delegation

The secretary of a military department obviously cannot himself make all the many and varied operating decisions required. He must delegate his authority. Following the pattern that has been used in the Army and the Air Force, he may delegate authority for managing *all* operations to the Chief of Staff. Or, following the Navy pattern, he may delegate author-

EXHIBIT I. SECRETARIES' TENURE OF OFFICE, DEPARTMENT OF THE ARMY



ity for all *military* affairs to the Chief of Staff (in the Navy, to the Chief of Naval Operations), and delegate authority for managing the other major activities, especially *supply*, to his civilian assistants.

The choice of these alternatives is the critical issue in the organization of each military department. Hence, our committee reviewed the experience of the Navy and Air Force as well as the Army. It considered the advice of former civilian secretaries of the Army and Department of Defense, former key military officials, and informed civilian observers. On the basis of extended consideration the committee arrived at three related conclusions:

1. *Military vs. civilian responsibility*—There is no logical distinction between the responsibilities for military and for civilian affairs. "It is *not* possible (for administrative purposes)," as the Rockefeller Committee emphasized, "to make a sufficiently clear distinction between military affairs, on the one hand, and, on the other hand, civilian affairs (such as political, economic, and industrial affairs) to serve as a practical basis for dividing responsibility between military and civilian officers, or for establishing two parallel lines of command."

The basic division should be between determining what is to be done and the doing of it. The Chief of Staff should be responsible for the *doing*, and his civilian bosses (the military department secretaries) for determining *what* is to be done and seeing that it is done.

2. *The Chief of Staff*—The Chief of Staff can and should serve simultaneously as a military planner, as a member of the Joint Chiefs of Staff, and as operating manager of the Army. Our committee recognized that as a member of the Joint Chiefs of Staff, the Chief of Staff is a principal military adviser to the President, the National Security Council, and the Secretary of Defense; and this task places important and heavy burdens on him. Yet, since his responsibilities are essentially interrelated, we concluded that rather than their being split up he should be aided and staffed to carry them out.

The question is how to aid him to meet the perennial problem of top managements everywhere—organizing the operating job so that the chief executive can have time to think and plan. The first step proposed is to fix responsibility and to establish clearer lines of accountability. The Advisory Committee proposed that major executive responsibilities be fixed in three new offices—a Vice Chief of Staff for Supply, a Commander for Supply, and a Commander of the Continental Armies. This step would reduce the number reporting directly to the Chief of Staff and, even more important, establish clear lines of accountability on which the Chief of Staff might depend.

3. *Civilian assistants*—The job of the secretary's civilian assistants, i.e., the under secretary and the assistant secretaries, is to help the military machine to work: to see that basic policies laid down by the secretary are carried out, to observe current operations continually, and to insure that policies are altered as needs arise; in other words, to guide and coordinate, not to operate, and to advise and counsel the military, not to take over.

In sum, the committee recommended that the Sec-

retary of the Army fix full operating responsibility on the Chief of Staff, who should be regarded as the department's operating manager, not merely as chief of the secretary's staff. This is entirely consistent with the Army Organization Act of 1950, which charges the Chief of Staff with "supervision of all members and organizations of the Army." With this responsibility squarely fixed, the Chief of Staff would not be able, as some have been in the past, to "pass the buck" to his civilian superiors when that proves convenient.

Civilian Control

If the Secretary of the Army delegates responsibility for operations to the Chief of Staff, what then is the role of his civilian assistants, the under secretary and assistant secretaries? By entrusting such large responsibilities for operations to the Chief of Staff, does the secretary relinquish, in practice, civilian control?

There are those who contend—and vigorously—that there are two kinds of civilian control: "active," in which the civilians operate, and which is good; and "passive," in which the military operates, and which is bad.¹ Those who hold these views regard the Navy organization, with its direct civilian command line on the materiel side, as the only way in which real civilian control can be had.

Our committee's analysis convinced us that these concepts of active and passive control are unrealistic, sterile, and unproductive. And our analysis of Navy departmental organization in particular raised substantial doubts whether the Assistant Secretary of the Navy for Materiel exercises any more effective control than do his colleagues in the Army and the Air Force.

Every student of the organization of the military department agrees that civilian control is a democratic essential. But *how* can it be achieved through a succession of men drawn from civilian life, often with no previous experience in related activities, for periods on the average of less than two years? For example, of the seven men who have served as Assistant Secretary of the Army for Materiel—perhaps the biggest job of its kind in the world—only two had previous industrial experience pertinent to the Army's supply-management activities. The analysis of secretaries' tenure of office during the period 1947 to 1953 in EXHIBIT 1 reveals that the responsibility for the materiel function changed hands seven times in seven years!

Objective consideration of the experience of each of the military departments leads to these conclusions:

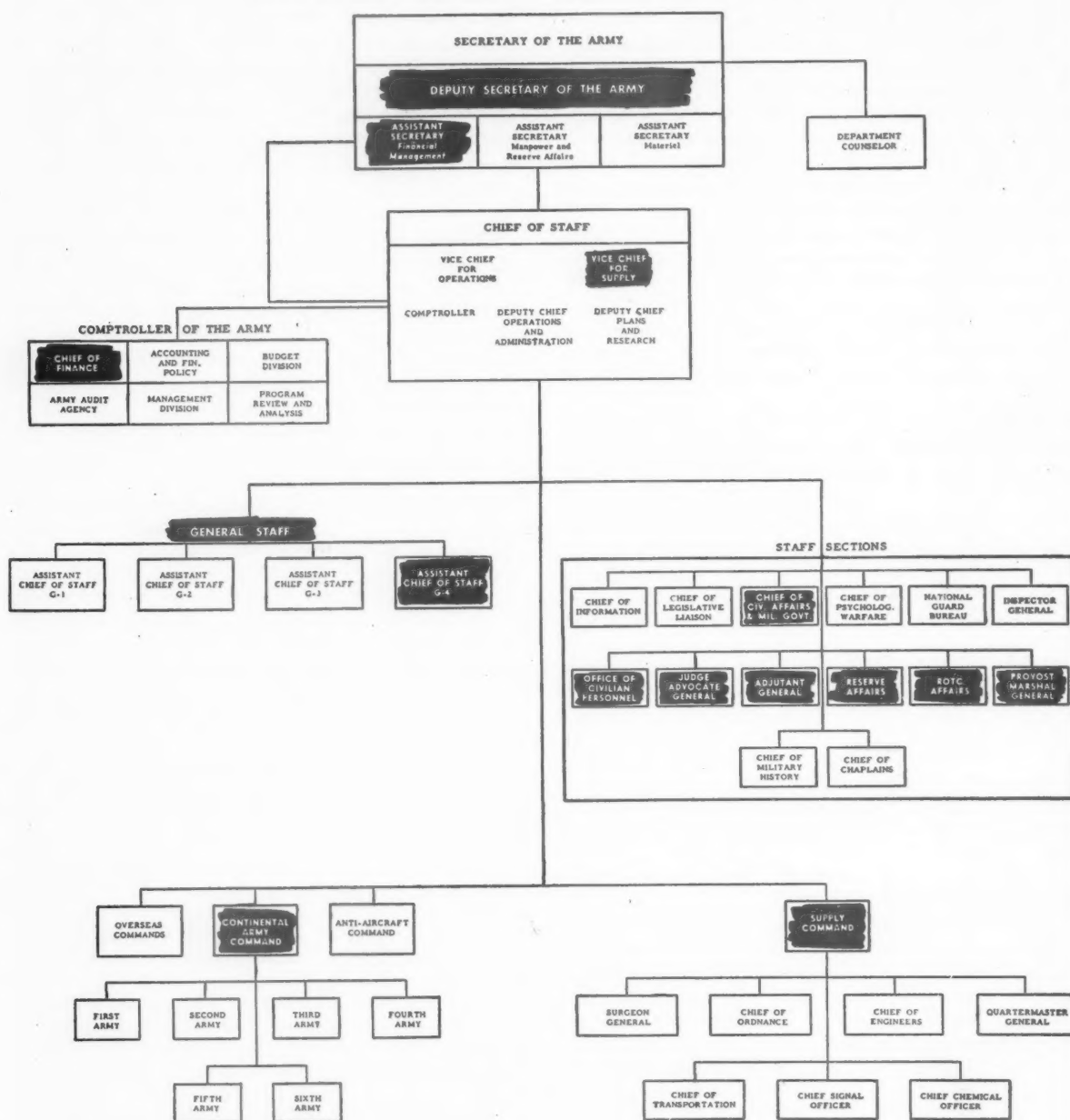
(1) The conduct of operations of the Army establishment is on such a scale that even the most experienced executives cannot gain complete familiarity with the operations in a short time.

(2) The tenure of office of top civilians in the Army is relatively short. Organizational continuity such as that provided by a normal business or professional military organization is lacking.

(3) The number of men experienced in pertinent industrial activities and in the business affairs of the military who might effectively discharge operating

¹ See H. Struve Hensel, "Changes Inside the Pentagon," HARVARD BUSINESS REVIEW, January-February 1954, p. 98.

EXHIBIT II. PROPOSED PLAN OF ORGANIZATION FOR ARMY ESTABLISHMENT
(Titles denoting changes from existing organization marked by black)



responsibilities is limited; and of these men the number who are willing to accept appointments is even more limited. However, men capable of measuring results, appraising performance, defining principles and policies, and providing the checks and balances have been available.

Therefore the committee concluded that the day-by-day operating job should be fixed squarely on the career military organization. A large, important, and positive job still remains for the under secretary and assistant secretaries—if the secretary is to get his work done. And this job is one that will make civilian control a reality, rather than a bungling interference in complex operations with which many civilian ap-

pointees are unfamiliar. This job involves:

1. *Formulating policies* (the Assistant Secretary for Materiel, for example, formulating policies to govern the Army's procurement, supply, and related activities);

2. *Supervising the preparation and administration of the Army's operating programs* (the Assistant Secretary for Manpower, for example, supervising the Army's program for recruiting, organizing, and training troops);

3. *Prescribing methods by which major functions are to be performed;*

4. *Determining the fiscal and operating data required to evaluate operations;*

5. *Appraising continually the effectiveness of the management and efficiency of the operations that the civilian assistant is assigned to supervise;*

6. *Participating in the selection and appointment of key officials who will do the operating job under the civilian assistant's supervision.*

This definition of the assistant secretary's job makes him essentially responsible for *functional supervision* in a broad and full sense. When Charles E. Wilson was the president of General Motors, his vice president for engine production did not himself manage an engine plant; he supervised, counseled, and appraised a group of five operating vice presidents who managed engine manufacturing plants. The recommended role of the assistant secretary may be likened to such a "group vice president." If he brings to the job the pertinent qualifying experience in business, the Assistant Secretary for Materiel, for instance, will be in a position to supervise, counsel, and evaluate those military officers who manage the day-to-day procurement affairs.

Supply System

Next to fighting, the Army's big job is supply—the developing, procuring, storing, and distributing of the vast quantities of goods and weapons required to equip a modern army. This has always been an important job, but as technology advances it has become more and more important. In the past it has been entrusted to the seven Technical Services—Chemical Corps, Ordnance Corps, Corps of Engineers, Transportation Corps, Signal Corps, Quartermaster Corps, and Medical Corps. And it has been left in substantial measure to their independent and undirected action. Indeed, as former Secretary of Defense Robert A. Lovett commented in his farewell recommendations for improving the organization of the Department of Defense, to attempt to reorganize these Technical Services is like "backing into a buzz saw."

At present the Technical Services are organized by type of materiel or service; thus the Ordnance Corps handles "hard goods," the Quartermaster Corps "soft goods," and the Signal Corps electronics. Some previous studies have recommended replacing this scheme with a functional organization. This would mean that one organization would be responsible for all research and development, another for procurement of all items, and a third for all storage and issue.

Which is the better type of organization? The basic question seems to be: Are advantages of greater speciali-

zation, coordination, and uniformity with respect to a *function* (e.g., procurement) more important than the need for coordinating and resolving differences between functions with respect to an *item* (e.g., tanks)?

Coordination of the development, procurement, and distribution of an item is a more meaningful basis for organization, our committee concluded, than specialization in each function. There is good support for this view in business experience. Many of the country's outstanding corporate enterprises are organized, like the Technical Services, on a product basis; their number includes several progressively managed businesses which formerly had the functional setup but felt compelled to change.

Organizational Improvement

There are, however, three substantial opportunities for improving the organization and management of the Technical Services.

(1) It might be advantageous to regroup the present activities and even to abandon some of them. There is obvious overlap today in the activities of the Chemical, Signal, and Ordnance Corps. But these and other overlaps should be resolved only after detailed analysis. And this analysis will best be made by whoever is to be responsible in the future for the direction of these services.

(2) It would be wise to eliminate the present conflicting responsibility for the direction of the arsenals, depots, centers, and other field (Class II) installations through which most of the work of the Technical Services is done. The commanders of these installations are now responsible to the chiefs of the respective Technical Services for performance of their assigned missions. But simultaneously they are dependent on (and in a measure accountable to) the commanding generals of the Armies responsible for the various geographical areas in the United States. The result is confusion, a dilution of the authority of the chief of each Technical Service to get his job done, and inability to hold the commander of a field installation accountable for his failures.

Funds and personnel—and direction—for each installation should flow through one channel, directly from the chief of the Technical Service. The commander of a field installation should look to one boss and have one source from which he takes his orders and gets the funds and personnel needed.

(3) It is imperative to provide more effective direction and control for the Technical Services and their chiefs. In 1918 and again in 1942 it was neces-

sary to build, after war had started—and at considerable cost in time, dollars, and lives—an organizational mechanism adequate to direct and control these services in the vital tasks for which they were responsible. As things stand now, it would be necessary to do this again in event of another full-scale mobilization. The problem is how to get the needed direction and control.

Direction and Control

Existing Army regulations provide that the Assistant Chief of Staff, G-4, "directs and controls." Yet the chiefs of the Technical Services make patently clear that they regard only the Chief of Staff of the Army as boss. Moreover, the responsibility for providing men and money to accomplish the tasks to be done by each Technical Service is obtained not from G-4 but from the Assistant Chief of Staff, G-1, and the Comptroller of the Army.

To assure essential consideration of the increasingly important supply problems at the topmost echelons of the Army's military staff, the committee proposed the creation of a new position as Vice Chief of Staff for Supply (See EXHIBIT II). Integrating supply planning with other aspects of military planning is a full-time task requiring a highly experienced and qualified individual. Generally speaking, the Chief of Staff is not likely to have had extensive experience in many important aspects of supply management, or to have the time to deal specifically with the many problems arising in the supply field. He needs the aid of a vice chief to advise him on supply problems and thus to make him effective in meeting both his planning and his managerial responsibilities. This new position of Vice Chief of Staff for Supply would be a counterpart of the Vice Chief of Operations, which would represent a continuation of the present position of Vice Chief of Staff.

To provide the Technical Services with the needed direction and control and simultaneously to provide assistance to the Chief of Staff, it was proposed that the Technical Services be given a boss. The confusion as to who now directs and controls these services would be eliminated by fixing this responsibility squarely on the head of a Supply Command. The Assistant Chief of Staff, G-4, would continue to be responsible for determining the Army's supply requirements and for supply planning; but all responsibility for developing, procuring, and supplying these requirements would be placed on a newly created Supply Command (but with its responsibility confined to the continental United States).

I would like to stress that this proposal envisages a different setup from that of the Army Service Forces organization in World War II, which provoked controversy and criticism. The Army Service Forces were responsible for a much broader area than would be assigned to the Supply Command. They were responsible for such service agencies as the Provost Marshal General, the Chaplains Corps, the Adjutant General, the Service Commands, which were the analogues of the present Continental Armies, and the management of certain overseas supply activities.

By contrast, the Supply Command would have a more limited, even though vast, responsibility. Each of the seven Technical Services would remain for the present a separate operating agency, but each would be aided by a degree of coordinating direction that does not now exist, and each would be fully accountable for performance in a degree that does not now prevail.

Leadership

Improvements in organization are essential to more effective management of the Army's vast supply activities, but they will not do the job alone. Changes in organization must be accompanied by improvements in the processes of selecting and training leaders. Top-level positions and high rank have been reserved too often for officers who have distinguished themselves in combat and operations. This has repeatedly placed able combat officers in positions of great responsibility for supply, where they were inexperienced and unqualified.

The Army's supply-management responsibilities require officers and civilians of particular competence. Such competence will most likely be found in individuals who have acquired a well-rounded understanding while coming up through the organization. But there is now a drastically limited opportunity to achieve high rank for those officers who choose a career in the vital supply activities of the Technical Services rather than in the combat forces.

Establishment of the position of Vice Chief of Staff for Supply and creation of the Supply Command should multiply several-fold the number of opportunities for achieving the rank of general officer for those officers who devote their lives to supply careers. But this increased number of opportunities must be supplemented by "built-in processes" to insure:

1. The development of the specialized competence of future supply officers when they are with and in the command of troops, to give them an understanding of the needs of the

combat forces as well as the techniques of supply management.

2. The philosophy of making selections for key positions in the Supply Command and for other key supply tasks on the basis of superior performance in supply management rather than as a reward for success in combat or operations. (This calls for a substantial and revolutionary, but an essential, change in organizational psychology.)

Accountability

Both responsible management and democratic control depend, in substantial part, on clear lines of authority and accountability. This was emphasized by the Rockefeller Committee's report. Also, the Congressional investigation of ammunition shortages in early 1953 made obvious the necessity of a clearer line for effective management of the Army's supply activities. As far as Congress and the public could see, no one other than the Secretary of the Army himself was responsible for supply of the Army.

The Army's Advisory Committee persistently sought ways to establish clearer lines throughout the Army. Our proposal for the creation of a Vice Chief of Staff for Supply and a Supply Command was designed to establish a clear, firm line of accountability for supply. We concluded that the basic organization of the combat force provides such a clear line and has worked well; its effectiveness has been demonstrated twice in this generation. The need, the committee contended, is for similarly direct lines of responsibility for each of the Army's other basic jobs—training, research and development, providing legal services, and managing its finances.

Training

Fifteen or more organizations now share the responsibility for training personnel. The Chief of the Army Field Forces and the Assistant Chief of Staff, G-3, share responsibility for formulating training policies and supervising the doing of the job. The bulk of the training is done by the six Continental Armies and by the seven Technical Services. Their respective responsibilities and their accountability to either the Chief of the Army Field Forces or to G-3 is unclear.

To clarify organization responsibilities the committee proposed:

1. That G-3 should be responsible for establishing the policies that guide all agencies with training responsibilities.

2. That a continental Army Command should have sole responsibility for basic training of all individuals, all combat arms training (individual and

unit), all combined training, and all civilian component training for which the Department of the Army is responsible.

3. That certain of the General Staff and Staff Sections and the Supply Command should be responsible for specialized training of individuals and units until they are passed to the control of the Armies in the field.

The commanders of the six Armies and the Military District of Washington now report (along with more than 20 other major officials) directly to the Chief of Staff. He has no time, nor does he have staff assistance, for effectively evaluating how well the Armies do the training and other jobs assigned them, their costs of operations, and the performance of their commanders.

To provide the Chief of Staff with a fully accountable assistant to insure the effectiveness of the training command, the committee proposed the establishment of a Continental Army Command. Its commander should be responsible for those functions now assigned to the Chief of Army Field Forces and to the Continental Armies and the Military District of Washington. He should approve plans, programs, and budgets for the work of each Army; develop long-term plans for increasing the efficiency and effectiveness of the Armies; and, most important of all, evaluate regularly the performance of the activities for which each Army is responsible.

Research

Despite significant advances, the Army's organization is not now adequate to insure the creative development of the weapons and materiel that will guarantee our fighting men better arms in another war. Responsibility for leadership is diffused among two members of the civilian secretariat, the Chief of Research and Development, and the four Assistant Chiefs of Staff. Most of the research activities are performed in the Technical Services; four-fifths of the annual funds available for research and development are allocated to the Ordnance, Signal, and Chemical Corps. There is no effective coordination of the activities of two or more of the Technical Services engaged in research on a single project; for instance, the development of a land mine may proceed independently of the development of the vehicle by which it is to be laid.

If the Secretary of the Army is to have a clear organization line to which he may look for effective performance of essential research and development tasks, two steps are necessary. The first is to reassign responsibilities for functional supervision of research from the Under Secretary of the Army to the Assistant Secretary for Materiel.

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A second and more significant step is to clarify and enhance the position of the Chief of Research and Development in the Office of the Deputy Chief of Staff for Plans and Research. It is at these echelons that an attitude which understands the uses of research and development and its importance, especially in peacetime, must originate and project itself throughout the Army.

The Chief of Research and Development must have adequate authority to stimulate, support, and coordinate vast and varied research and development activities. This authority for functional supervision must be sufficient to insure that the Chief of Staff can hold him accountable for results. His responsibility is not to conduct operations; that will continue to be the responsibility of the Chiefs of the Technical Services.

Legal Services

The Judge Advocate General is by law the legal adviser to the Secretary of the Army and to all officers and agencies of the department. More recently the position of Department Counselor has been established within the secretary's office to provide a personal adviser for both the secretary and his civilian assistants. Confusion exists as to the relative responsibilities of these two offices, particularly in the matter of supply (in the handling of legal questions incident to procurement). There is little or no coordination of the independent staffs of lawyers in the several Technical Services to insure consistent interpretations of legislation and policies. There is an apparent need for coordination that is not now met either by the Department Counselor or the Judge Advocate General.

Our committee concluded that the responsibility for coordinating all legal services in the Army should be fixed on the Judge Advocate General. It reached this conclusion with full recognition that the military legal staff has concentrated on problems of military justice and pay, and has failed to recognize and accept responsibility for problems of procurement law in the past.

We reasoned that the secretary requires the assistance of a small, highly competent, and personal legal staff. This staff will not be effective if burdened with the responsibility for department-wide coordination of all the legal services. Moreover, the rapid turnover of civilian lawyers in the Department Counselor's Office (four men have served in this post in the past five years) and the difficulty of obtaining competent legal talent at the salary scale that can be paid make it unwise to assign the Department Counselor this large, important, and continuing

responsibility. The Judge Advocate General's organization can, if strengthened, provide the essential continuity of legal direction.

Finance

The principal financial officer of the Army is its Comptroller. His functions comprehend the whole gamut of financial activities from the development of a budget to the appraisal of operating efficiency and the audit of accounts. To perform this group of functions the Comptroller now controls the Army Audit Agency, but he has limited control over the Finance Corps. The committee recommended that the Finance Corps be placed under the direction of the Comptroller and that its functions be integrated with those of the Comptroller. This should be a step toward creating a corps of officers trained in the whole concept of comptrollership for the Army.

A more important control problem results from the fact that at present the Comptroller, by regulation, reports concurrently to the Secretary of the Army (through an assistant secretary) and to the Chief of Staff. This arrangement has been criticized on the grounds that no man should be responsible to two supervisors. But in appraising this criticism it must be borne in mind that the Chief of Staff, as the Army's "operating manager," requires a "financial right arm"; he must have someone on whom he can depend for the management of financial affairs and financial controls. At the same time, the Secretary of the Army requires direct access to the Army's financial affairs if he is to appraise performance and direct his "operating manager."

This seems to be a case, in other words, where dual accountability is justified. Here, again, we have a business parallel. There are some progressive business enterprises where a comptroller reports both to the vice president of an operating department and, through a financial vice president, to the president of the company.

To establish this parallel in the Army, and hence to create a clearer line of accountability for financial affairs to the secretary, means that an additional position of assistant secretary must be created. This civilian official should have authority to fix (for the secretary) the Army's financial policies, to review and approve the budget, and to establish such methods of accounting and reporting as he deems necessary to insure an adequate independent source of information about the Army's financial operations. In short, he should play the role of the typical corporate financial vice president—formulating policies, counseling

on day-to-day operations, appraising the results, and insisting on changes when and where they are needed.

Processes

Clearer, more direct organizational lines will go far toward making the Army a more effective enterprise. But if the secretary and his principal assistants are to be informed at all times of accomplishments and thus be able to hold accountable those responsible for progress, they must have more adequate operating data than are now available.

Despite significant advances in establishing programing processes, the Army does not yet have adequate instruments for executive control. Its Primary Program System does not define schedule, and measure accomplishment of the Army's basic tasks; it confuses staff services essential to the accomplishment of tasks with the basic tasks for which an Army is maintained. The bulk of the Army's work performed in its industrial-type installations as well as at its camps, posts, and stations is not included in the present programing system. Most important, the responsibility for accomplishing what is programed is not squarely fixed on officials who have adequate authority to achieve results. To correct this situation the following steps ought to be taken:

(1) Programing should concentrate on the basic tasks for which the Army exists rather than on essential but supporting activities. Secondary activities should be scheduled in relation to prime objectives. This means focusing attention on maintaining anti-aircraft defenses rather than on providing medical services for men who need medical services so that we may have an effective anti-aircraft defense.

(2) Programing must be extended to the lower management levels and installations in order to make the tasks assigned more specific and to schedule performance.

(3) Clearer lines of organizational responsibility for training, research and development, supply, and finance should be established. This will permit fixing the responsibility for accomplishing what is programed on responsible officials—the Commander, Continental Army Commander; the Commander, Supply Command; and the Chief, Research and Development.

(4) Improved programing is dependent on the simultaneous development of better processes of accounting and reporting. The Army now uses more than 30 separate systems. These reporting systems inundate supervisory officials with masses of unrelated detail which obscure important facts rather than provide data needed for making executive decisions.

(5) More effective fixing of responsibility and measurement of performance await the establishment of more businesslike and more informative processes of recording and accounting for what is done and at what cost. Existing accounting systems should be integrated or replaced by a single, universal system of accounts. Establishment of such a system for use throughout the Department of Defense is now being studied by the Cooper Committee—the Advisory Committee on Fiscal Organization and Procedure appointed by the Secretary of Defense, August 18, 1953, under the chairmanship of Charles P. Cooper. That committee's recommendations should be of material aid in solving this basic problem.

(6) Without delay existing reports throughout the Army should be reappraised to reduce the volume of detail reported to higher echelons, and especially to distill out the data required by the secretary and his principal civilian and military assistants for full understanding of what is being done and how well.

Better programing and better accounting and reporting will make possible better budgeting of the Army's resources. These improvements will enable the relating of the Army's budget to programing systems, and will reveal to the secretary and his assistants the basic relationships between costs and work. Such information is essential to the economic and efficient administration of this vast enterprise.

Conclusion

The national defense establishment required if this country is to maintain indefinitely a larger armed force than ever before in peacetime, and continuously spend from one-sixth to one-fifth of the national income on its maintenance, must be efficient and economical. That efficiency and economy are stimulated but not achieved by clarifying the small even though important organization of the Department of Defense along lines that the Rockefeller Committee ably laid down. The larger task, however, still remains. It is to insure economical organization in each of the military departments.

In achieving that end three problems are of prime importance. Two of these problems are peculiarly governmental problems and must be resolved in terms of our democratic traditions and preferences. They have to do with (a) the distribution of authority between the Secretary of Defense and his staff and the secretaries of each military department, and (b) the respective roles of the civilian and military leaders within each mili-

tary department. The remaining problem is analogous to that faced by business enterprises daily: How shall human beings be organized and managed so as to insure efficient and economical accomplishment?

In discussions of these problems one key question has been continually debated: Should as immense an establishment as the Department of Defense be centralized or decentralized? The Army's Advisory Committee clearly recognized the essential need for "unification" of our military efforts; it recognized that the Secretary of Defense "should have complete and effective authority over the entire Department of Defense"—both are recommendations of the Rockefeller Committee. But simultaneously its inquiries as to the internal functioning of the Department of the Army make clear that it is essential to delegate adequate authority to the Secretary of the Army so that he is able to carry out his important policy-making, planning, and operating responsibilities.

The role to be played by civilian leaders in the military departments has been debated since long before the establishment of the Department of Defense in 1947. There can be no debate whether the civilian secretary shall be supreme; the debate revolves around *how* his civilian assistants—under secretaries and assistant secretaries—can most effectively contribute to his direction and control of all aspects of the department's operations, military and civilian alike.

Our committee spelled out *what* these civilian assistants should do and what authority they should have—assigning them a role which will enable each, within the limit of his experience, ability, understanding, and personality, to establish policies, supervise operations, and evaluate performance. This is analogous to the role of the executive of a large private enterprise at a comparable level of responsibility—determining what is to be done, how it is to be done, and how well it has been done, but not doing it. Our proposals were concerned with operating realities that determine how strong and positive a hand the civilians shall have in the affairs of the department, not with the theoretical and meaningless conceptions of civilian control.

Despite the vast size and the unique function of the Department of the Army, efficient management requires organizational structure and processes of control similar to those with which

²See Eugene S. Duffield, "Organizing for Defense," *Harvard Business Review*, September-October 1953, p. 32; also H. Struve Hensel, op. cit.

the businessman is familiar. Clearer lines of accountability, as the President has suggested, are needed if the Army is to get its job done more economically and more efficiently. This is the simple premise on which the committee's proposals for internal reorganization and for improved programing and budgeting are founded. It is the forge on which better management in the Army, as in other enterprises large and small, must be pounded out.

Internal organizational improvements, as well as better programing, accounting, reporting, and budgeting within the Army, are tremendously important to the efficiency of this nation's defenses and to the reduction of its tax bill. It is essential that the committee's proposals be adopted even while debate continues over the questions of decentralization in the Department of Defense and how best to attain civilian control.—Reprinted by permission from *HARVARD BUSINESS REVIEW*.

Purchase Easy Way

(Continued from page 18)

information in these ways.

With respect to our manufacturing programs, the Production Manager is the authorized requisitioner, and to a great extent, most of our procurement is for this purpose. He signs all requisitions for production materials and parts, and he is responsible to our Controller for our inventory. We supply the Production Manager with periodic statements of vendors' lead times, and about special market conditions that must influence his inventory control policy.

When we are about to buy our initial lot for a production program, we use our first set of requisitions for production materials, parts, etc., as the basis of securing three (3) quotations from competing sources of supply. We select the suppliers to fill these requisitions on the basis of their meeting our specifications on time, low price per unit, and low tool cost, if any is involved. All things being equal, we place the business with the lowest bidder. We have a Vendor Evaluation Form which we make up on a new supplier, which includes reference to his financial condition, and a Plant Visitation Report of the cognizant purchasing agent, if required. Usually, our selection of a vendor is made after a careful study of his facility and his proposal to supply us.

After a manufacturing program gets under way and recurring requirements come to us for procurement, we place

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Recognize Executive Ability

(Continued from page 11)

hundred top candidates. All six hundred of these men are apparently far above average in ability. All of them have superior scholastic records. All have in some way distinguished themselves in their work for "Arthur Chemical" or they would not be up for consideration.

How does the company's present top management group choose twenty men from this pool of six hundred? The selection is largely done through talking about the men and their records. There are, of course, interviews with the men. Also, a number of top executives give their opinions of each candidate's qualification. Finally, somebody has to sit down and make the ultimate decisions. If you talk to one of "Arthur Chemical's" top executives about what actually goes on in the way of objectively viewing the executive ability of the six hundred candidates during this selection, he will candidly admit (off the record), that in the case of several of the men considered, he is convinced that personal sentiments, individual preferences, and unconscious biases were operating in the men who did the selecting. If this executive is right, then "Arthur Chemical" may be betting its corporate future on sending certain executive trainees to Harvard who may not be as able as some of the men who were passed over. Mistakes in recognizing executive ability, when made at this level can be costly—in some instances, they can be crucial to the entire future of a great company.

Trying to estimate how a top performer will work in a new and somewhat different situation is another vexing kind of problem for those who must make executive appraisals. "Harvey Manufacturing" wants to pick the best man from among its regional sales managers in America to go to Europe and head up the company's sales efforts there. After much pouring over performance records, interviewing, and discussing, they decide that "Ted Folsom" is their man. He has a brilliant record as a domestic sales executive and looks very promising.

About a year after Ted takes over direction of company sales in the European market, rumors begin to float back that things are not going so well. When the company investigates, they find that Ted has "let himself go" on the Continent, having fun when he should have been tending to business. It might be noted that this was the first sales management job he worked at, where he was completely on his

own and did not have an immediate superior whom he knew would be around to check up on him at periodic intervals. When placed largely on his own he began to neglect business in favor of personal pleasures to the extent where the company's position in the European market suffered. What happened to Ted? Was his earlier performance in this country improperly evaluated? Wasn't he nearly as good a manager as "Harvey Manufacturing's" top brass thought he was? Or was Ted the kind of person who is temperamentally a *Number 2 man*? That is, was he the kind of man who functions beautifully as long as he is in the Number 2 position, where he knows that he has a superior over him who is keeping an eye on his work? If he is a Number 2 man by temperament, is his European failure an unconscious method of falling short of expectations to the point where he will be returned to America and to be placed in a sales role where he will again be able to operate as a Number 2 man?

There are, of course, other business situations in which being able to recognize an executive ability to fill a specific executive assignment is equally important. The "Bryson Petroleum Corporation", has expanded rapidly over the past twenty years. They have continuously upgraded able young engineers and other scientific and technical specialists to handle the complex processes required in manufacturing petroleum. At relatively early ages, many of these young men are on the threshold of top executive assignments. While each man has performed well enough in technical positions on the way up, the rate of company growth and consequent promotion of these men has been so rapid that few of the company's top executives have had an opportunity to take a really good look at each man. Of fifteen or twenty promising men, which are the two or three that have the greatest potential for reaching, say, the vice-president level in ten or fifteen years? The answer to this question means a lot to "Bryson Petroleum", to its present executives, to its stockholders, and to the American consumer who purchases its products.

Another type of executive appraisal problem, one that is most acute in the post-war period involves the assignment of essentially marginal men who were hired after they graduated from college simply because the company could not get anyone else. "Best-Buy Stores" has this kind of problem. They hire young men and train them to be store managers. The going is rough for the first decade or so. However, if a man is a good merchandiser

and can manage, he can eventually reach an excellent paying spot in the company. "Best-Buy Stores" took anybody that could walk and talk during the post World War II scramble for bright young college graduates. Since they were unable to offer as attractive a starting situation as many other kinds of businesses, they lost many good men to recruiters from other industries. There were times when they hired men just to try to meet a portion of their own recruiting quotas. After six or more years with the company, many of these "sub-standard" men are moving up the seniority ladder to a level where "Best-Buy" will either have to slot them for executive jobs, or decide to leave them at essentially middle level assignments. How do the top executives of "Best-Buy Stores" decide on the men in this group? Many of their present executive staff have been out of operating positions for twenty or more years. They are administrators, policy makers, planner. How successfully can they recognize whatever executive ability lies in this sub-standard group? What do they then do about these men?

These are the kinds of real live executive appraisal and development problems that four of the country's top corporations are facing now. Naturally the true names of these organizations could not be used in the illustrations. But people in each company and in the industries that each company represents are aware that this is the sort of thing that top management is up against when it comes to making decisions about men for executive positions. These are the kinds of problems that one seldom sees set forth in textbook or academic discussions of "executive development", or of its problems and solutions. Yet, they are among the most difficult kinds of problems with which corporate management has to deal.

Personality Assessment and the Recognition of Executive Ability

For the past seven years, we have been using projective techniques to look at the personality patterns of business executives in America. During this time, we have obtained records on some twelve thousand or more business men in this country. These men work at all levels of management, and are employed in a wide variety of occupations and industries. Though some people feel that projective techniques are not as effective as other methods are for recognizing executive ability (3) (4), we believe that there is a growing body of factual data on the performance of individuals who were assessed by projective tech-

niques, which indicates that useful and accurate evaluations can be made on this basis (8) (9) (10) (11).

As we have reviewed the careers of these thousands of men in business from the standpoint of their life history, we have studied the clues which each particular man's style of behavior gives us. Grouping these clues into a systematic analytical framework helps us to predict how individuals will probably perform if placed on specific executive assignments. In other words, we have used projective techniques to assist us in recognizing executive ability. In making our judgments, we equate a man's capacities with the *psychological job demands* of the position for which he is being considered.

In order to look at each person assessed, systematically and from an over-all standpoint, we have gradually evolved an outline which helps us to get a balanced perspective about each man. There is nothing particularly "magical" about the outline we have developed. It has been revised and modified as experience has shown us a better way to proceed. However, we have found it quite helpful in recognizing executive ability ourselves. We hope that people who have to recognize executive ability as a part of their management duties will also find it useful. While these categories were developed for the purpose of appraising executives by means of projective techniques, they can also be useful as a guide in organizing one's observations about executives whose performance has to be evaluated, regardless of what methods are used to obtain a picture of the man.

Obviously, there is no one "perfect" executive type. Rather, there are various successful combinations of individual behaviors that are peculiar to different executives. If we can discover the pattern which a given executive uses, and if we also know what the general pattern of the job he is being considered for is, we can tell pretty well how he is apt to make out in that job. Here is the general outline and specific check points which we have found helpful in analyzing executive ability:

I. Work Attitudes

The first question which we ask ourselves as we examine a man's personal history record (with particular emphasis on past job performance) is: what does a particular type of executive work mean to this man in terms of his over-all style and major personal values? This is the same thing as saying, why does this man work? Does he work merely because he has to earn a living? Does he work

because most other men of his age and social background work? How does he *feel* about his work? When we can answer these questions about a man, we know a good deal about how he is apt to perform in any adequately defined executive position for which he may be under consideration to fill.

People's work attitudes generally fall into one of a few general categories. While we have used somewhat facetious captions to centralize and focus the meaning of some of the categories given here, this business of appraising executives is a serious and highly personal one. Each man assessed, is and must be treated as an individual whose dignity is worthy of respect. Therefore, while some of the following designations may be mildly humorous, they are used only because they tend to create a quick mental picture of men who operate this way. The terms are *emphatically not* intended to be used in any light or frivolous sense when evaluations of a particular man and his capacities are actually being made.

Here are some of the broad general categories into which individual work attitudes might be grouped:

The Craftsman. As the title implies, the Craftsman is an individual who looks at creative work performance as an end in itself. He takes pride in good workmanship at any level he finds it. He is as happy to see the same seriousness and interest in other men as he has himself. Therefore, he can be genuinely appreciative of the contributions of others who have similar attitudes towards their work.

The Star Performer. The most important personal satisfaction which a star performer gets from his work is the pride which he feels when he realizes that he has made a big impression on people whose opinion of him is important. He will work his head off to earn such attention and interest, so long as he has a worthwhile audience. However, he is not strongly motivated to put forth his best efforts unless he has such an audience. Consequently, men whose work attitudes place them in this classification are not apt to do their best on assignments which do not provide them with the necessary audience to view their performance. This may be why some capably and brilliant men seem to lose interest in work when they are placed in executive positions which do not give them the kind of "audience reaction" they need. The star performer is apt to be jealous of other able men in the organization for the simple reason that they tend to take the limelight away from his own efforts.

The Approval Earner. This type of man works primarily because he wants to earn the approval of his associates, often primarily of the men above him. So long as he gets frequent evidences that such men do approve of his efforts (and hence of him as a person) he, too, will give his best. However, such a man can grow visibly indifferent towards his work when his efforts do not bring him the kind and amount of approval he needs to feel adequate as a person.

The Born Competitor. To this type of man, work is a vehicle which provides him with a means of demonstrating his ability to excel competition. Whenever he feels that he is in competition with other men, he will pour all his energy into coming out on top. But when he no longer faces this type of work situation, he can lapse back into a comfortable pace, saving his major efforts for future battles for supremacy.

All four of the above men are driven to perform work by very active personal motivations. So long as each gets the kind of lift he wants from work, he will give everything he has to his job. However, if he is placed in an executive assignment that does not give him the particular kinds of satisfactions he requires, he can perform at much below his rated capacity.

In contrast to such men, *The Pay Check Grabber*, is generally motivated to work only so long as he gets an immediate, direct monetary reward for his efforts. As a rule, he expects to be paid at frequent intervals. He is inclined to relax whenever the span of time between his efforts and consequent material rewards is too great. For the most part, men who fall into this category, in terms of primacy of work attitudes, do not get very far in executive ranks. The main reason for this is their lack of drive and determination. They are reluctant to undertake difficult assignments unless the financial rewards for their work is in rather high ratio to their expenditure of effort.

II. Mental Functioning

The next general area we think about when we look for signs of executive ability is a man's mental functioning. This goes beyond his ability to solve arithmetic problems, or to answer vocabulary questions on a language test. We are interested here in three things:

- (1) What intellectual capacities does the man have?
- (2) How does he use these capacities to solve executive-type problems?
- (3) What kinds of situations of

events motivates him to use his capacities?

The minimum intellectual requirements for successful solution of business problems vary with the level of complexity of the work being done. At the white collar level, problems encountered in such occupations as bookkeeping or in tangible goods selling can probably be solved by a man whose intellectual capacities fall in the high average to superior range as measured by a test of adult intelligence such as the Wechsler-Bellevue test. For higher level executives, a minimum of superior intelligence, as measured on such a test, is probably a prerequisite for success. So long as an executive has superior or higher intelligence, the principal question is how realistically he uses this intelligence in terms of the demands of his work.

There are a number of different styles of using intellectual capacities. Each can get results in certain types of executive assignment. The thing to remember in looking at the way a man uses his mind on business problems is that he is apt to use this same "style" of mental functioning no matter what type of task he is given. Also, if he is placed in an executive assignment that requires a different style of problem solving approach than he uses, he is apt to be less effective than when put in the kind of position in which his type of mental activity fits best. Here are some of the different styles of mental functioning we have encountered:

That of the Self-Starter as against The Retriever. The *Self-Starter* sensibly looks around for problems to tackle. He feels that he has both the right to search for new problems and the capacity to solve them when he tracks them down. His confidence and eagerness to find new worlds to conquer make him particularly valuable in an executive situation that calls for a good deal of mental initiative and enterprise. In contrast, the type which might be called, *The Retriever*, typically waits until he is told to go after a problem before he thinks about mastering it. Once alerted and given the go ahead, he is capable of doing a fine job. However, men of the *Retriever* type generally must have someone to tell them that it is all right for them to proceed before they feel they ought to do so.

The Organized Confusionist. On the surface, the man one might term an *Organized Confusionist* often looks completely collected, calm and in command of the situation. It is only when one gets close to his everyday activity and realizes what a welter of confusion he wanders about in that

one realizes how poorly integrated his mental functioning really is. Such a man might be deeply hysteric (to use a clinical term). Or he might have some other form of shaky emotional balance that makes it impossible for him to function in a systematic manner for any length of time. As the author has mentioned in a previous article (12) it was possible for such men to rise to rather high executive station in large corporations in past decades. Insofar as scientific personnel practices and organized executive development programs identify and eliminate such individuals, corporations of the future should be run with greater efficiency because these men will rarely reach top policy levels.

The Fire Fighter. The man people refer to as the *Fire Fighter* is one who handles today's operations as they come up. He is not inclined to worry about the future, because he is accustomed to concentrating on what is happening here and now. Such a man can turn in a lifetime of solid executive performance, so long as he is on hand to meet crises as they come up. Most of the *Fire Fighter's* problems come from the fact that he does not think about training his men or about developing a team that is prepared to anticipate emergencies before they arise. Since he gets so much personal enjoyment out of hard-hitting on the spot action, he seldom thinks to prepare subordinates to act at times when he may be absent from his work.

The Long-Range Thinker. In contrast to the *Fire Fighter*, the *Long-Range Thinker* sits back and considers the long-range implications of any given decision he is called upon to make. He weighs, balances, and formulates future plans of action. Because he looks ahead, neither he nor his men are apt to be caught off balance by unforeseen emergencies. This is true whether he is there personally to meet them or not.

In comparing the effectiveness of the *Fire Fighter* and the *Long-Range Thinker* as executives, we find that it is not so much a question of level of mental functioning, but rather of personal style. Ideally, the long-range approach should be more effective because it meets problems before they become serious or even before they arise. However, in actual business practice, a great deal of useful work is done by the *Fire Fighter* type of thinker. Such a man can operate successfully at many levels of executive functioning.

III. Achievement Drive

Another aspect of an executive we look at carefully, is his drive for achievement. We ask ourselves, what

does this man want to get out of his efforts in the way of personal achievement? How far does he really want to go up the management ladder? How hard is he willing to work to get there? A good many men convince themselves that they are ambitious to rise because society expects them to be. They tell themselves that they are truly willing to make sacrifices in order to advance. And yet, when we look closely at their deeper motivations and drives, we sometimes find a considerable variance between their surface aspirations and their basic achievement needs. Some of the categories into which men might be grouped in considering the depth of their desire to advance are:

The Uneager Beaver. Nearly everybody who looks like an executive (and is therefore apt to be rated on his executive ability) feels ambitious to a certain extent. However, those who do not really want to put out the continuous effort which is required to reach the top tend to bog down when they find a management level that is really to their liking. Some of them manage to fail in subtle ways if they are upgraded beyond a comfortable level. Such failures may enable them to drop back to a more congenial niche.

The Climber. This is the kind of man who is intent upon getting ahead at all costs. Usually the most serious costs are to the people who work with him. Sometimes he feels driven in his struggle to rise. He feels that he will be an utter failure if he does not reach the top. At other times, he is either a conscious or an unconscious "operator", a man who uses both his work and the corporate structure primarily to advance his own ends and to reach his own objectives.

The Assistant. Men who could be referred to as the *Assistant* type are those who unconsciously want attention and personal response from the men above them more than they want successful, independent achievement. If put too much on his own, a man who is the *Assistant* type may sense that he is in a situation where he is not getting sufficient attention and response from above to feel happy. Ofttimes, such a man will ask for a transfer, or otherwise maneuver to regain the shelter of a superior's wing.

The Genuinely Creative and Ambitious Man. This kind of man sees executive work as an opportunity for creative self-expression. He enjoys putting his energy and intellect to work solving business problems. He wants to go as far as his abilities will take him. However, while he is advancing his own career he also has consideration for the organization, as

well as for the aims and aspirations of his associates.

IV. Personal Adjustment

Much more often than many people realize, emotional adjustment and emotional maturity are the main factors which govern the way a man puts his executive talents to work. We have previously cited the cases of "Len Wagner," the man who suffered a "middle-aged depression"; of "Joe Foster" who had a manic-depressive break which required shock treatment; and of "Tom Rockford," whose gradual schizoid impairment forced him to leave his job as plant manager. Until a few years ago, terms like these were considered appropriate only for clinical psychology and psychiatry. Most people thought of their use as being only within the setting of a mental institution. We are just beginning to realize the extent to which unconscious personality factors influence our own careers and the careers of those around us. (5) Because industry is coming to have a greater awareness about how significantly a man's personal adjustment influences his ability to think and act, we can expect to see considerably greater emphasis on this important area in the future (13). Projective techniques such as the Rorschach Test, the Thematic Apperception Test and the Worthington Personal History Technique, are ways of uncovering unconscious feelings and attitudes which influence people's everyday behavior. From the way in which a man handles particular stimuli in each of these projective techniques, we can get a picture of him as a unique personality. Such a picture helps us to predict how he will make out in a particular executive job assignment.

When we see a man who only feels safe when functioning in a rigid, orderly, predictable work environment, we can gain greater understandings of how and why he feels that he must act this way when we study the dynamics of child development and personality formation (14) (15). We know that such a man is apt to be both happy and effective when we put him on a job that calls for tense, concentrated effort to keep an unbroken system running smoothly. And we also come to know that he will be worried and unhappy if we place him on a job where constant change disrupts his tight system. We come to appreciate how this man's personal adjustment influences his vocational choices. We learn what kinds of work he can and cannot do well, and how such work is related to his total personality.

If investigators in the field of psychosomatic medicine are correct when

they indicate that emotional attitudes and feelings about one's self and about the world can cause grave physical illness, indeed even possibly loss of life itself (16) (17), then we can more readily understand how these same forces might cause an executive whom the rest of the world considers a success to feel inside himself that he has failed miserably, that he is worthless, and that he has no right to go on drawing his salary. When we know that a man feels this way, we begin to understand more about why he may unconsciously pick fights with his boss, why he might talk about resigning despite his demonstrated capabilities. And why he might even feel that if the world does not discover his awfulness and punish him for it, that perhaps he ought to punish himself. In using projective techniques to uncover such personality dynamics, we sometimes encounter personality patterns which are suggestive of syndromes that have been outlined by researchers in the field of psychosomatic medicine, as mentioned above. In such cases, it may be possible to provide the medical department of the company with clues about matters of this sort from a study of a man's personality which will assist the department in working out an executive health program for that individual.

Very often the attitudes a man shows which reveal clues to his personal adjustment, are the key to much of his everyday performance as an executive. It would be possible to cite case history after case history to demonstrate just how personal adjustment in an individual has aided or hindered his performance as an executive. Almost certainly, industrial psychology and industrial psychiatry of the future will be more concerned with such matters.

V. Adjustment to Others

In addition to being able to get along with himself, a successful executive must be able to get along with other people. The crux of good executive relationships is that associates up and down the line know where the individual executive stands, and how they stand with him. The good executive has positive, creative motives which influence his relationships with his business associates. He is trying with deep sincerity to get the best possible work results. His own emotional maturity and personal stability are reassuring to associates. He works on the basis of facts and logic; and yet, he also has a keen awareness of the consequences of his actions and of their effect on those who work with him. He remains reasonably calm, even when working under intense pres-

sure. He neither becomes overly emotional nor unduly depressed. In short, he is an active, energetic, achieving man with a realistic interest in working with human beings towards common goals.

There are many effective styles of executive operation that produce good work results and also earn the respect of an executive's associates. Some top executives are often blunt, honest, and forthright. When they see a fact they say so. Their emphasis is on using these facts to get work results, not to use them as clubs to bludgeon their associates with, not as scintillating evidences of their own intellectual creativity. Other men are calm, quiet, and courteous in their relationship with other individuals. Both types of men can get good results and yet have different external styles of adjustment to their fellow men.

Our research to date indicates that the attitudes that a man shows towards his fellow workers on the job may be a carry-over from the attitudes which he formed in early life in his home environment. Thus, feelings towards one's father are often shown with but minor variation in feelings towards one's superior. In some respects, all authority figures or "superiors" tend to be given a measure of our early attitudes towards our fathers. If an executive rebels against accepting normal supervision, or feels threatened when he has what he feels is too close a relationship with a powerful superior, it may be because of a carry-over effect from the way he unconsciously felt about his own father. The mature executive works well in harness, he accepts the logics of company structure and works within it. He is neither needlessly independent of superiors, nor is he overly dependent upon their instructions and support.

Feelings about one's mother can be carried over into feelings about the organization. If we unconsciously feel that our mother made unreasonable demands upon us when we were children, we may be suspicious of being asked to do too much for the company unless, and until we are certain of the rewards we will get. Occasionally we find situations in which a boy's mother died when he was still young, perhaps at a time when he felt that he needed her most. He may unconsciously blame his father—as the supreme authority in his childhood world—for allowing the mother to die—not being old enough to understand the physiological and biological processes involved in her death. In later life, he may seek out a career as a technical expert, and become a man who uses his skills to keep the com-

pany "alive" to help it grow and prosper. He may be emotionally concerned about long-range planning, and be unduly anxious to have the company's welfare protected at all costs. In performing his role as an expert, he may unconsciously come in conflict with his superior feeling that the man over him (a substitute father) is not sufficiently concerned about the company's welfare. In subtle ways, he may quarrel with the boss, attempting to see that his own ideas for company development prevail. In so doing, he may wrangle and create an unhappy atmosphere, since the superior feels himself under attack without quite knowing how or why. All this may be the consequence of his acting out fears and anxieties that resulted from his mother's untimely death.

Often our relationship with our brothers and sisters influence the way in which we regard our co-workers. Some executives are cooperative, willing to help out their associates when needed. Other men have a childish drive to get what they want regardless of the way in which this drive affects their fellows. Still others feel that it is not right for them to win out in the competition for top jobs, perhaps because they felt that it was not right for them to surpass their brothers and sisters in earlier family competitions. Some men have an essentially "lone wolf" attitude towards their associates. They feel uncomfortable if their work places them in too close a relationship with men at their level. If we look closely at the personal history of such men, we often see that these attitudes are a carry-over from their earlier relationships with their brothers and sisters.

Observing the way in which a man handles his children may tell you much about the way he handles his subordinates for we have learned that there is an emotional continuity between the two. He may encourage those under him to develop in line with their capabilities. Or he may be essentially indifferent to them as people, concentrating on the smooth performance of his own tasks to the exclusion of those who aid him. Other executives unconsciously view subordinates, particularly able younger men, as a personal threat. They worry about the possibility that the more able of them might surpass them. Conversely, if by studying a man's method's of handling subordinates we may learn much about the way in which he raises his children.

One of the most troublesome problems in executive behavior is that of the man whose adjustment to others is such that he has to have their good will and affection, regardless of the

cost. Such a man is so dependent upon having people think well of him that he tries to shape policy in such a way that he will gain approval and affection. In so doing, he finds it almost impossible to make unpopular decisions. Even when a business situation calls for factual action, he cannot bring himself to act in a way that might hurt some individuals (and thereby run the risk of incurring their enmity). Such executives are apt to vacillate in functioning and in policy making, never being quite able to take direct action for fear that someone "might not like it." Since many problems which executives must solve can only be successfully handled by practical, clear-cut decisions, regardless of what some individuals may think or say about the action, men whose adjustment to others forces them to have good will at all costs, make poor executives.

VI. Work Effectiveness

Finally, we pull together the information we have gained about a man in terms of work attitudes, mental functioning, personal adjustment, and adjustment to others. Then we make a comparison of the man as we observe him, with the psychological demands of the job. This gives us our estimate of the man's probable work effectiveness. For example, if the executive assignment under consideration calls for one whose work attitudes are those of a *Craftsman*, we are not apt to get top performance from a man whose unconscious attitudes towards work are those of a *Star Performer*. Without an audience, the latter is unlikely to perform at his best. By the same token, if we have a position wherein the mental functioning requirements call for a *Long-Range Planner*, a man whose typical style of intellectual operation are those of a *Fire Fighter* is apt to be uncomfortable in the job. Thus, we match the psychological job requirements with the personality characteristics of the candidates under consideration. If this is done accurately enough, we can be quite certain of our predictions about how a given man will work out on a given executive job.

Where we have two equally capable men in terms of intelligence, willingness to accept responsibility, cooperativeness, and other desirable psychological job characteristics, one may be more suited to the particular position we have in mind because of other attributes. Perhaps the most clear-cut differentiation in this kind of situation is the factor or factors which distinguish the *line executive* from the *staff executive*.

The successful *line executive*, in addition to having other necessary characteristics for competent handling of his position, is primarily concerned with getting work results accomplished. This has a strong emotional meaning for him. He does not particularly care who does the work as long as it is done properly.

In contrast, the able *staff executive* cannot really feel happy and comfortable in his work unless he can see its outcome in terms of his own personal creativity. To him, taking personal part in work is very important. Therefore, it is difficult for him to keep his hands off an actual work process. He finds having to work through others to be personally unsatisfying. He enjoys taking a difficult problem which is handed to him by a line executive, and working out the best possible solution for it that he can think of. But he must be personally active in the solution of this problem if he is to be happy.

"Walt Crown" is an example of a successful staff executive who was offered a tempting challenge to take a position as a line executive. At the "top of the heap" in his nationally known organization, he was the chief staff man reporting directly to the president and executive vice-president of the company. Though this was an exceptionally responsible assignment, it did not utilize all of Walt's talents and abilities. Therefore, he felt restless and was tempted to ask for a special assignment, one which involved building a large, new plant and ultimately directing its operation as plant manager. In counseling with Walt, we pointed out that he had all the technical skill and intelligence necessary to do a bang up job in setting up this plant. But we also pointed out to him that his personality was the sort that was apt to make him bored with day-to-day production operations once he got the plant running smoothly. Therefore, we suggested that he might like to think about developing into a specialist who sets up new plants for the company and gets them in operation. He might want to structure his duties so that he was able to leave for a new assignment after each plant had settled down to routine operation. By so doing, he would avoid having to sit at his desk and watch others get production out after the thrill of licking a tough problem was gone.

In estimating a man's work effectiveness, we take into account his probable executive ceiling. This is evaluated in terms of his ability and his real desire to get to the top. We ask ourselves; at what point is this man apt to hit a comfortable perform-

ance level and think about remaining in that spot?

We also take into consideration his feelings and drives and the ways in which these are apt to influence his executive health. If a man's drive to excel plus his unconscious competitiveness, is so great that he might have a coronary attack or other cardiovascular complications at a relatively early age, the company may not be able to realize its long term investment in his executive development—because he may wear himself out prematurely. Personal counseling can often assist such a man to come to more realistic terms with his drive and ambition. If this happens, he can reach normal retirement age in good health and may serve the company for decades without letting his feelings impair his usefulness (17).

Feelings about retirement itself is a factor that is more and more being taken into consideration in evaluating a man. Some men are ready to retire in their forties and fifties. Their psychological make-up is such that they would prefer to do this. Other men so dynamically welded to their job that to leave it means that they literally have little else to live for. Perhaps the latter type of man should never completely retire as long as he can render valuable service to the organization and his health enables him to continue working.

This leads us to a consideration of *selective retirement*. It is entirely possible that in the near future, executives will be carefully examined by appropriate specialists in terms of their psychological and physiological make-up; and after such examination, a mutually agreeable selective retirement program will be worked out that will benefit both the executive and his organization. Selective retirement would take into account the obvious fact of individual differences in attitudes about working in later maturity. The curious concept of mandatory retirement at a set chronological age does not do this. Some men are young, active, creative, and eager to work at a chronological age of seventy or eighty. Other men would prefer to retire in their late fifties or early sixties. When we estimate a man's probable executive performance, from the psychological standpoint, we must take into consideration the length of time he may want to (or be able to) function as an executive. This is particularly important when we have to pick men in their twenties or early thirties and give them extensive and costly executive training on the assumption that the company will get its greatest benefit from their services

twenty or thirty years from the date the appraisal is made. As mentioned, *selective retirement* would be determined by a joint decision in which a number of specialists participated.

Military and Civilian Use of Executive Ability

At first glance, an uninformed observer might opine that conditions in the military services and in civilian business are so totally different that it is impossible to set forth useable principles that will apply to executive development in both. In considering factors which influence executive selection and development in the military services, one can immediately call to mind the service customs and traditions which have an important bearing on who shall do what, when. Attendance at a service academy and later at specialized schools, is obviously an important factor in an officer's selection for higher command positions. In the Air Force, many line executive assignments can only be held by a rated pilot. Some assignments are only given to an officer who has attained the rank of Senior Pilot or Command Pilot. Only men with such flying experience can be expected to have the flying knowledge required for the successful manning of some executive positions in that branch of the service.

Theoretically, civilian corporations are less restricted in their utilization of executive talent wherever it may be found. The president of one of the country's top chemical corporations, for example, is referred to by members of the organization, as their "top salesman". This is a well deserved tribute to the man's exceptional sales abilities for he is a salesman and not a chemist. Yet, the heads of the various operating divisions of this company are all top notch chemists or chemical engineers, men with outstanding technical reputations in their scientific fields. Thus, while the chief executive of the company must be primarily concerned with selling, only specialists can make its products.

Personal-social factors operate in executive selection in civilian life as they do in the military services. We look at a man who is being considered for a top staff position in a big corporation. Upon inquiry, we learn that the candidate is the brother-in-law of one of the members of the board of directors of that organization. And yet we find that the individual is not likely to get the position in question because he is not the right type of executive to fill the requirements of this particular job. True, he was specially considered for the vacancy because of his familial

relationships. True, he may receive another position in this organization. But it is equally true that his personal abilities are being carefully weighed in terms of his probable ability to handle this, or any other high level position in the organization, for which he may be considered.

The recent intensive Air Force study of qualities that make for success in line and staff officers, of which Nevis's doctoral dissertation (18) was a part, is an indication that the military services are likewise seriously interested in applying scientific techniques of personnel appraisal to their executive selection problems. Since World War II the staff position of Controller has been added in some branches of the Armed Forces. We also see intensive programs of industrial engineering, and management methods training being utilized in such branches of the military service as the Ordnance Corps, and in many others. These programs are a strong indication that the Armed Forces are eager to apply techniques which seem to have been helpful in making civilian business activity more effective.

Thus, in both military and civilian programs of executive development, we see an increasing emphasis on each man's ability to perform. To return to our original example of developing baseball players; it is a man's ability to handle a specialized position on the baseball team that determines whether he stays in the lineup or not. Major league competition is so fierce that a poor performer hurts the team's chances of winning the pennant. By the same token, a poor performing executive, either in a military or a civilian organization, is increasingly less apt to be kept around. The team simply cannot afford to retain him.

An examination of the work of industrial psychology and of military psychology in America (19) will reveal that the one has been stimulated by the other. The mass intelligence testing programs of World War I gave civilian industrial psychologists their start in applying similar techniques to corporate personnel problems of selection and placement in the following years. The Aviation Psychology testing programs in World War II, and the selection of men for special assignments such as those required in O.S.S. work (20) (21) gave a strong impetus to the use of projective techniques and other devices for carefully evaluating men in terms of all factors influencing their ability to perform on complex assignments. We are now using a number of assessment techniques which were employed in these military situations to assist industrial managements

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AGEMENT

in recognizing executive ability among members of their organization.

The Armed Forces have a dual interest in this process. First, they are rapidly adopting methods and practices that have proven useful in civilian corporations for aiding top personnel in developing their individual executive talents. The "ability to recognize executive ability" is the keystone of any such program. Second, they are concerned that the corporations which supply them with material be operated as efficiently as possible. Efficiently managed supplier organizations mean not only a saving in tax payers' dollars, they also mean that our national defense resources are giving us the greatest possible amount of protection from potential aggressors. Consequently, activities in civilian corporations which supply the Armed Forces, which give promise of improving corporate management via better executive appraisal and development, are vitally important to executives who direct the Armed Forces. Accurate recognition of executive ability is thus a central point in America's ability to produce, and thereby to protect the free world.

Human Relations

(Continued from page 8)

stands by itself, and is not related to or dependent upon other factors. The findings are closely interrelated in actual life situations. And the deck is shuffled differently for each play.

An example is the foreman who goes to bat for his workers. He strengthens his leadership as a rule—but only if he gets results from the higher ups on his promises.

The forces operating between leaders, groups, and followers have complicated relationships. There are valid exceptions to every generalization founded on reliable research. It would be hazardous to follow a cook-book set of rules.

The leader deals with complicated situations in which many forces pull in different directions, some pulling together. We are not robots who operate in a social vacuum, like a nickle-in-the-slot machine. The leader needs to analyze the human forces involved in a situation and decide the best procedure for coordinating the forces into a final common path.

The research findings single out basic factors for the leader to use in sizing up situations, and deciding which cards to use. For instance, the leadership demands are not the same for a committee session as for a construction operation, even when the same group of people is involved.

Blue-collar and white-collar groups also present differing leadership demands. Large groups and small groups, too.

There are many jokers and wild deuces.

The wildest deuce of all is to assume that others will react as we imagine we ourselves might. Or as we feel others should react.

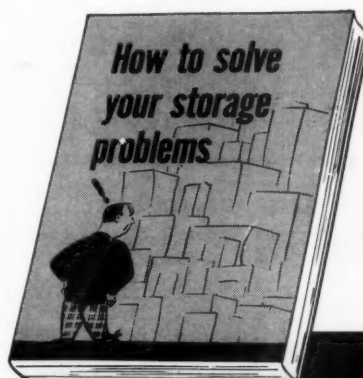
The new Man of Vision gets a more accurate picture of these human elements, and uses this to help guide him to The Gleam. His mind on people as they are, and less on the jackpot of opportunity.

Editor's Note: Dr. Laird's popular and informative book, "The Technique of Handling People," is reviewed under BOOK REVIEWS in this issue.

Purchase Easy Way (Continued from page 28)

the business with the suppliers which we established at the start of the program. Since we try to establish sound suppliers of our needs, most of them continue for years as good sources for us; others are superceded by more efficient suppliers, and we believe that our roster of suppliers, as it stands today, is the most efficient combination we could obtain. We, in the Purchasing Department, however, are aware that our purchasing efficiency can be improved, and it is to that end that we bend our efforts, by concentrating on the weak points of our supply line.

We limit our interest in a potential supplier's labor union affiliation to its



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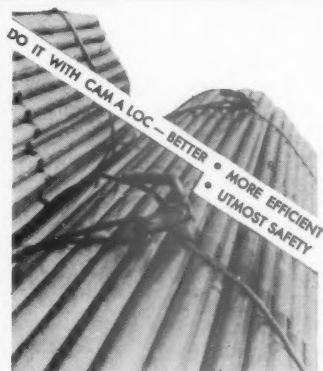
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identity, and to his contract expiration date; after he becomes a supplier, we keep that information up-to-date. The reason, of course, for this interest is to safeguard our own manufacturing and assembly-line operation. One of our most pointed cases involving the practical use of this information was in 1952, prior to the general steel strike. We were able to advise our Management that a steel strike was imminent, and that EASY could protect its shipping commitments with the U. S. Army and Navy, if they would recommend to the Armed Forces that certain steel mills, which had reached prior wage agreements with the Union, be required to make the steel and produce the necessary hot rolled bars for shipment elsewhere for cold-drawing to our specifications. This suggestion was passed on to the Armed Forces and this general plan was used to supply EASY with steel during and after the steel strike. EASY did not default on any shipping schedule of the Armed Forces, as a result of the steel strike in 1952. This is an illustration of particular interest and significance to the readers of "Armed Forces Management," because it is the result of purchasing the EASY way.

Good work habits pay dividends to the purchasing agent, as well as to EASY, which is the case with each purchasing agent being able to read a blue print. This aptitude is fundamental to original thinking in the industrial purchasing field, and our men are blessed with this competency. They can unfold a part print, prior to a vendor negotiation, and enable the conference to come to the point immediately. In fact, they can employ the part print to keep the negotiation or discussion on the track, and to prevent the introduction of extraneous views which, like as not, will cost EASY money, if allowed to remain part of the consideration at hand.

If material or castings are under discussion or negotiation, in addition to the part print, our purchasing agent can take our copy of the EASY component Standard Data and Cost Book in which all parts are catalogued by part number and name. Each part is described on separate pages, which includes the complete description of the machine operations, and the sequence of them, the name of the machine used, the department number in which the machine is located, and the kind of inspection gages used to inspect the part. Our purchasing agent can become familiar with our requirements, and this knowledge stands the company in good stead in many ways.

Our purchasing agents walk through our plants either en route to a par-

ARMED FORCES MANAGEMENT

particular destination or merely to look around. This is a good work habit, particularly when the man goes to our Receiving Inspection Department or to our storage areas to see what he bought. Or, to put the idea in another way, those in the supervision group of the Manufacturing Department can, and do, call any one of us from our office, to see first hand the materials and parts we have bought. Believe me, this was often an embarrassing situation, when steel was critical and I had to purchase substandard steel from brokers, etc., who were not regularly in the steel distribution field. The point is, that our purchasing agents have to face the goods they buy, as well as the people who use them, and that is an educational experience which never ends for each of us.

Our staff makes efficient use of the long distance telephone and telegraph facilities. We spend important dollars each month for these quick communication services, and the results are well worth the cost, when interpolated in terms of the importance of our civilian and defense production. We will hesitate to consider the need for such an expenditure, but not for long, if the communication requires speed and is important. We try to anticipate as many urgencies as possible, so as to handle them by mail, or with the vendor's representative on his next visit. I have only guessed at the monetary loss per hour, which would result if our assembly-line was shut down, and I have a rough figure in my mind, which serves as a yardstick for cost comparison purposes, in matters of expenditures of this kind. The loss would be so great from a shutdown, that it is not usually difficult to evaluate whether or not to use the toll telephone and telegraph.

Materials or parts which are not in agreement with our specifications on our purchase orders are rejected by our Receiving Inspection Department; we notify the vendor of the rejection and the reason for the rejection, and ask for disposition instructions. The vendor probably will ask us to forward samples to him to illustrate the substandard condition which caused the rejection; he may send his representative to our plant to investigate the complaint. Unless the vendor disagrees with our inspection conclusions, he usually gives us shipping instructions to return the shipment to his plant for replacement or credit. There are times when it is practical, from the expense viewpoint of the vendor, for us to rework this shipment in our plant at the vendor's expense; or, we may require the shipment for production and have to rework it ourselves to keep our as-

sembly-line in operation. Rework is attempted only when EASY is capable or able to eliminate the substandard condition probably by performing the manufacturing operation neglected or omitted by the vendor. Rework is a manual operation, as a rule, and is inefficient when compared with the production methods of the vendor; the cost of rework is expensive and it is not a satisfactory situation for us or for the vendor.

There are instances where we find defective material or parts in process; our Receiving Inspection procedure does not, in all cases, uncover hidden defects, nor does it aim to 100% inspect a shipment. In this kind of case, we have spent money handling and processing the material or part, up to the point of rejection, and we lose this money by rejecting the part at this point. This type of rejection can cause difficulty, because of the monetary loss that we incur. The vendor will usually replace the defective material or part, but he absolves himself of responsibility for the manufacturing expense, which is lost; some vendors will agree to reimburse us for the extra operations to rework the defect, if such is possible and compatible with our quality standards, and other vendors will not recognize any labor or overhead chargebacks, resulting from reworking the defect. Suffice to say, such instances are special cases to be resolved on their merits. Usually, if the maintenance of vendor relations is an important factor to EASY, we will absorb the loss involved in making an in-process rejection. There are cases that result in our stopping further vendor production for our account, and while we are reluctant to take this action, we do take it when the facts warrant it.

Supply and demand came well into balance in early 1954; certain materials, parts, etc., became readily available in 1953. We expected this market leveling to take place, so we formulated a purchase price reduction program in late 1953, to be put into action after the start of 1954.

An outgrowth of our efforts in early 1954 to reduce our purchase prices was the re-emphasis on evaluating what we buy with the thought of recommending to our Engineering Department that material substitutions be considered for certain uses, or that parts be redesigned so as to take advantage of using a new material, process, technique of manufacture or idea that a vendor presents to us as a selling point. Some concerns term this to be purchasing development, value analysis and purchasing research; it is a composite of purchasing "know-

how," development engineering, methods and standards engineering, production engineering, packaging engineering, materials handling understanding, etc. Our company is small enough to enable the purchasing agent to work directly with our manufacturing, cost, and engineering departments to accomplish these same results, and that is precisely how we do it.

A vendor or potential supplier can visit our offices during the business hours of the week and see the purchasing agent of the material or product he sells. We do not restrict visitors to specific calling hours, and we are available to visitors at all times. In addition, we receive visitors by special appointment, particularly those from out of town. The principle reason for our interest in visitors is, that they are one of our stocks-in-trade; they represent expert knowledge of many kinds, and it is our job to learn how they think they can be of service to EASY, and to pass that information on to our organization. We are the eyes and ears of the manufacturing and engineering departments, so to speak, and we do our best to service them well. We are not their sole means of getting information, of course, but we try to be versatile and effective, when we do present information and ideas to them.

In addition to several good trade and daily newspapers, we keep posted on the market, and the news which affects the market, through the bulletins of the National Association of Purchasing Agents, of which each of us is a member. This is a practical and realistic group of purchasing agents, whose national organization is outstanding. Its survey of business conditions and general forecast, as published in its Bulletin to members is accurate and dependable. Members of the Armed Forces, and readers of "Armed Forces Management," who are located within the United States should remember that a member of the National Association of Purchasing Agents very likely is not far away, who would lend a willing ear to one wishing to ask a question, secure information, or to discuss a commercial problem. Send him a letter or call him on the telephone; you will find such a purchasing agent interested in you personally, and most anxious to assist you.

And so, when we purchase the EASY way, to get 100 cents worth of value for each dollar spent, we really mean that it is not easy, after all, but very difficult. Persistence and hard work seem to be the threads from which the fabric of purchasing success are woven, wouldn't you say?

PRODUCTS

designed to deflate production Costs

As a service to OPERATING DEPARTMENTS and PURCHASING OFFICERS, ARMED FORCES MANAGEMENT, beginning with the November issue, will provide you with a selected list of manufacturers' products. A Products Information Library has been established and descriptive literature, catalogues, and reference material is available to you without cost or obligation. The firms have been carefully selected, have a high standing in their respective line, and deserve consideration. They are NOT, in each case, advertisers in ARMED FORCES MANAGEMENT, but each offers you a service or product which we feel will be helpful in your operation. Operating and Purchasing departments are respectfully urged to take advantage of this service.

How to Use Armed Forces Management's Library—

At the bottom of this page a post card is reproduced which in future issues will be printed on post card stock. It will be perforated, self addressed and postage free. Each product advertised as well as those selected by the Library Department will be given a number. These will be products which we think will assist you in the better management of your operation. Many cost saving ideas are generated by Operating Departments who have available referenced information on products. Purchasing Officials will find this type of information invaluable. All that need be done is: fill in name and address, circle that which will assist you, and drop in the mail.

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Space limitations in October precludes incorporation of card in our first issue. Information is available however, on the products listed in this section by writing to — Products Information Library, ARMED FORCES MANAGEMENT, 121 North Madison Street, Rockford, Illinois.

In addition to the products and services of the selected advertisers in this issue, noted in Advertisers' Index, the following products are included by

our library for your information.

Steam Cleaners—The Henry Flow Control Company, introduced this week their

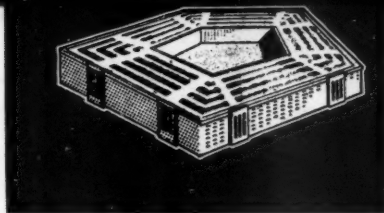
"Mighty Midget" Model No. 111. It provides a rapid cleaning of motors, compressors, condensers, machinery, engines and small parts without the necessity of dismantling. Normal degreasing and cleaning time is approximately 20 minutes for this portable ASME approved cleaner.

Military Aircraft—Sundstrand Engineering's package-type drives are being used on some of the nation's leading military aircraft for driving A - C generators. Engine speeds, from windmilling to full military thrust, are converted by this drive to hold generator frequency constant at 400 cycles plus or minus ¼% under steady state conditions. Drives operating generators in parallel will divide load within plus or minus 2 KW.

Sky Compass—The Kollsman Instrument Corporation has recently announced a new Sky Compass which will give accurate navigation data in high altitudes.

Greyhound Lines Incorporated offer inexpensive, dependable transportation to any point in the United States. More and more military departments are finding Greyhound the answer to personnel movements.

Chemical Containers — The United States Rubber Company has developed large collapsible containers for bulk shipments of chemicals. 500 gallon and 2500 gallon synthetic rubber and fabric containers are being used by leading companies for bulk shipments.



Washington Management

Crane Company Addition—Crane Company recently announced construction of a new 25 million dollar titanium plant at Chattanooga, Tenn. This is in addition to Crane's current products, Valves, fittings, fabricated piping, plumbing and heating equipment and some aircraft accessories.

Remington Rand Incorporated have a school where you can send personnel to learn all about electronic computers.

FencePaintR, produced by the Fence Painter Corporation, enables you to paint a chain link fence for a total cost of 3c per square foot. This is really a piece of equipment to save you time, money and personnel.

Glider Blue Print Racks, manufactured by Momar Industries, does away with unnecessary lifting and folding of prints. This easy filing rack is adjustable to allow for varying thickness of sets and thus utilize minimum space.

Liberty Storage Boxes, manufactured by the Bankers Box Company, provide the ultimate in economy. Here is a product which will enable you to weed out the inactive material taking space in your files and transfer them to low cost Liberty Storage Boxes. Used by some of the nation's leading corporations.

K-W Battery—This new battery manufactured by the K-W Battery Company, has a permanently mounted charger which can be plugged into any 110 volt, 60-cycle outlet. This feature eliminates removing the bat-

A tremendous saving will be effected in the new \$53 million Air Reserve center near New Orleans, La. Completion is not scheduled until 1957. The center will house Air Reserve units of the ARMY, NAVY and AIR FORCE.

To coordinate and correlate packaging and materials handling activities, Colonel James N. Sammons has been named Chief of the Packaging and Materials Division of the Office of Director of Transportation, Deputy Chief of Staff, Material, Headquarters USAF.

The Air Force, in directive 71-1, ordered heads of all Air Force Commands to designate one officer to assume responsibility for efficient management of the program in their headquarters and in the headquarters of their subordinate commands.

With a view toward economy and speeding development of guided missiles, the Defense Department has announced that the United States and Great Britain would pool their know-how.

Management-conscious Secretary of the Air Force, Harold E. Talbott, has announced the appointment of Lyle

S. Garlock as Assistant Secretary of the Air Force for Management.

The Department of Defense drive to cut government vehicle costs, is producing results. The Department of the Air Force reports net savings of almost \$6 million, the purchase price of more than 4,500 vehicles.

Department of the Army has just received the responsibility of furnishing ground communications equipment, used for adjustments of long range artillery fire, from the Department of the Air Force.

Two additional nuclear-powered submarines have been authorized by Congress. This will bring the Navy total to four.

The Armed Forces in connection with the National Inventors Council of the Department of Commerce, have drawn up a list of 200 of the most difficult problems affecting National Defense. The list published in a booklet entitled "Technical Problems Affecting National Defense", can be obtained without charge by writing the National Inventors Council, United States Department of Commerce, Office of Technical Services, Washington 25 D.C.

tery which can be left in the vehicle thus providing your installation with a costly and time consuming operation.

Paints for Metal - Working Plants—The Flexrock Company offers you a booklet which is a valuable reference guide of paints especially applicable in metal-working plants. Fume resting paints, non-yellowing whites, and acid resistant floor finishes are described simply but with complete details as to coverage, solvents, spraying and brushing. This text is indexed for

quick reference by the busy engineer or purchasing department.

Descriptive material on the above products is available in Armed Forces Management's Information Library, 121 North Madison Street, Rockford, Illinois.

Cutting Costs

(Continued from page 16)

it offers is evidenced by the more frequent use of such service during the post World War II period. In addition to the economic advantages it presents, however, the motor carrier industry, as an integral part of our national transportation system, continues to play an important role in our planning for national defense.



ARMED FORCES MANAGEMENT ASSOCIATION

NEWS and ACTIVITIES

MEMBERS of the Armed Forces Management Association offer their heartiest congratulations and sincere good wishes for success to the Editorial Staff of the ARMED FORCES MANAGEMENT MAGAZINE. By arrangement with publishers, this portion of the magazine will be devoted to the news and events of the National Organization of the Armed Forces Management Association. Aside from this arrangement there is no connection between the Magazine and the Association.

This association of management people (military and civilian) in the Department of Defense was incorporated in August 1953, motivated by an awareness of individuals in the Defense Establishment that in our economy only those enterprises can endure which conduct their operations through sound management practices. While the Association is not an official governmental organization, it does have the sanction of top military and civilian heads of the federal agencies concerned, and fills an existing need by providing an excellent vehicle for the discussion of the managerial problems which are peculiar to the government, particularly the defense element.

The purposes of the Association are to: (1) promote the elimination of waste and the development of efficiency through the study and application of sound principles and methods of management; (2) bring about a better understanding of the mutual interests of government management; (3) provide means whereby executives, supervisors, managers and all others concerned who apply sound management principles to problems would promote this common interest; (4) inspire in the membership of the Association a constant adherence to the highest ethical conceptions of individual and collective social responsibility.

The structure of AFMA is designed to achieve its purpose. In the National Organization, there are conferences, literature and national leadership. Since the membership includes outstanding leaders in all fields of management, seven divisions or committees have been formed to study and report upon management problems. Members of AFMA take a very active part in their groups in a way that would not be possible otherwise. The formation of similar type groups are encouraged in Field Chapters. These seven divisions and their purposes are:

Accounting Systems Division familiarizes itself with the management setting and requirements of the Army, Navy and Air Force and explores current and prospective use of fiscal, manpower, and material accounting systems and techniques that will best meet the needs of the three services for a more accurate means of relating the use of resources in relation to programs. The activities of this division should be of particular interest to military and civilian personnel in Accounting, Budget, Comptroller, Fiscal, Management Analysis, Management Engineers, Statistical Report-

ing and Systems and Procedures.

Administrative Services and Office Methods Division reviews those functions of management that relate particularly to the issuance, use, control and improvement of directives, correspondence, records, forms, and space in order to eliminate waste, introduce new methods, standardize and simplify existing methods, and provide better and more efficient service. The activities of this division should be of particular interest to military and civilian personnel serving in the following areas: Adjutant General, Administrative Assistant, Administrative Management, Administrative Services, Departmental Services, Forms Control, Procedures and Regulations, Publications, Records Control, Reports Control Space and Facilities Allocation, Supply Officers.

Executive Development and Control Division views the entire function of management from the eyes of the top executive to determine both the kinds of training and experience needed and the type of internal management control system required in order to achieve organizational objectives and at the same time foster the orderly development of the supervisor into a manager and the manager into an executive. This division is concerned with the determination of the qualities essential to being a good executive, the defining of the duties, responsibilities and positions that should be classified as being executive in nature and the development of a positive program for improving the executive skills and controls essential to good management within the Department of Defense. The activities of this division should be of particular interest to military and civilian personnel serving in the following positions: Administrative Assistants, Adjutant General, Administrative Officers, Assistants for Programming, Career Development, Career Management, Commanders, Commanding Officers, Comptrollers, Deputies, Directors, Division Chiefs, Executives, Executive Officers, Inspectors General, Management Analysis, Management Control, Management Engineers, Managers, Performance Evaluation, Program Coordination, Progress Analysis, Special Assistants, Staff Assistants, Supervisors.

Management and Industrial Engineering Division views those functions of management relative to the improvement of management controls, the conduct of management surveys, work simplification and work measurement, organization studies, manpower control, space and layout studies, methods engineering, equipment design and utilization, development of production standards, management engineering research and development, and other areas of management and industrial engineering so as to improve skills and abilities of the members of the Division and, as a corollary, to improve performance of the management engineering functions in the Department of Defense. The activities of this division should be of particular interest to military and civilian personnel serving in the following fields: Career Development Personnel, Comptrollers, Facility Engineers, Management Engineers, Inspectors General, Installations Engineers, Industrial Engineers, Managers, Materials Handling Engineers, Mechanical Engineers, O&M Examiners, Performance Personnel, Personnel Engineers, Production Control Personnel,

Production Engineers, Progress Analysts, Standardization Personnel, Standards Engineers, Time and Motion Technicians.

Personnel Utilization Division develops means for inventorying, reporting, analyzing, reviewing, and improving the utilization of the grades, skills, abilities, and numbers of personnel in relation to the assigned missions and objectives of the Army, Navy and Air Force. This is to maintain a balanced use of military and civilian resources as dictated by the changing requirement for grades, skills, abilities and numbers to permit the discharge of the various missions with the greatest possible effectiveness and efficiency. The activities of this Division should be of particular interest to military and civilian personnel in the following fields: Career Development, Incentive Awards, Manpower, Organization and Methods, Performance Evaluation, Personnel.

Programming Division studies the functions and techniques of programming with a view to discovering basic principles which are generally applicable to the Military Services at all echelons. This field is so broad as to challenge the interest of a great variety of managers, analysts, planners and policy makers. Among those who should find problems of programming of particular interest are: Accounting Systems Designers, Budget Officers, Budget Systems Designers, Commanders and their Immediate Assistants, Deputies, Directors and their Immediate Assistants, Executives and their Immediate Assistants, Industrial Mobilization Planners, Inspectors General, Installation and Construction Requirements Personnel, Major Weapons Requirements and Control Personnel, Management Systems Planners, Managers, Manpower Requirements and Control Personnel, Mobilization Planners, Program Analysis Personnel, Program Coordinators, Program Directors, Program Makers, Programming Systems Designers, Progress Analysis Personnel, Statistical Reporting Systems Designers, Supply Requirements and Control Personnel, War Planners.

Statistical Review and Analysis Division studies the requirements of the Army, Navy, and Air Force for various types of statistical data essential to sound management and to develop more effective means of statistical reporting, control, analysis, presentation and interpretation. This division concerns itself with the statistical reporting system as a whole, including the kinds and types of personnel, equipment and techniques essential to effective statistical reporting. The activities of this division should be of interest to military and civilian personnel from the following fields: Accounting, Comptroller, Machine Accounting, Management Analysis, Performance Evaluation, Personnel Records, Program Control, Statistical Presentation, Statistical Reporting.

The presentation of management problems and new management thinking and practices by outstanding leaders in industry and government offer an opportunity to the individual for well rounded development in the field of management, not only by taking what the Association has to offer, but also by contributing his own ideas. Through the media of publications, meetings, and personal contacts with other members, he is able to acquire a vast amount of the newest and

best information concerning techniques, procedures and methods. Membership in the Armed Forces Management Association could well mean the systematized development of leadership, a provision of means for the exchange of technical as well as general information, and the provision of a scientific approach to management.

At the 14th of July annual general meeting, results of the election of new officers were announced as follows: Mr. James M. Mitchell, OSD, President; Weldon T. Ellis, Jr. AF, Vice President; Tom Kouzes, Army, Executive Secretary; Editor of the Newsletter, Mary M. Mulford, Army.

Members of the Board are Lt. Col. H. H. Cloud, Jr. AF; Edmund D. Dwyer, Navy; Carl Freedman, Army; Frederick L. Harrison, Army; Larry W. Hoelscher, Army; Gus C. Lee, OSD; Margaret M. Moore, Navy.

The Association welcomes to its membership all personnel in government agencies, military and civilian, who are interested in better management. The encouragement of the establishment of local chapters is one of the major activities of the Armed Forces Management Association. It is through chapters that members meet to discuss formally, management ideas and problems. The goal for the Association for this year is the establishment of thirty field chapters.

A minimum of twelve members of the Association are required to establish a chapter. Members may submit a request for authority to organize together with the names and addresses of members, a proposed name for the chapter, geographic area to be embraced, names of Federal Defense Installations and activities in the area and an estimate of potential membership.

Chapters are free to undertake any activity in which their members are interested, so long as it is in accordance with the general policies of the Association. It is through these chapters that a continuity of management thinking can be maintained among the Association membership by military and civilian personnel whose duty assignments take them to the four corners of the earth.

The following are the Association's Chapters, in the order chartered, with present membership:

Baltimore, Maryland	133
Cheyenne, Wyoming	33
New York City	56
Alaska "Sourdough" Chapter	125
Amarillo, Texas	12
McDill Air Force Base, Florida	21
Philippines	31

Presentation of charter to the "Sourdough" Chapter was made on July 13th by Major General George R. Acheson, Commander of the Alaska Air Command.

Charters are presently being processed for the establishment of field chapters in France, England, Spain, Germany and Japan. Further information is available on individual or chapter formation from the Chairman, Membership Committee, Armed Forces Management Association, AFOMO-O2B, Pentagon, Washington 25, D.C.



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ARMED **F**ORCES **M**ANAGEMENT
ARMY NAVY AIR FORCE
MARINES COAST GUARD

PROFESSIONAL SERVICE PUBLISHING CO.
121 NORTH MADISON STREET
ROCKFORD, ILLINOIS

LE ROY F. HOLST
Editor

October 1, 1954

Dear Reader:

Launching a new publication will cover an editor's pate with gray hair at an incredibly fast rate. He is plagued by the feeling comparable, I presume, to that of the actor making an initial performance before a group of well-seasoned critics, whose acceptance or rejection of his performance spells success or failure.

The readers of ARMED FORCES MANAGEMENT are the critics, in this case, and the editorial content has been carefully selected for these highly specialized people who are far above the average in intelligence, and are persistently striving to supplement their leadership ability with new concepts of good management practice. Obviously, our success depends solely upon your acceptance of ARMED FORCES MANAGEMENT.

As advertising, the life-blood of any publication, is based on circulation, it is vitally important that we keep your enthusiasm alive and our circulation up, by publishing features and news of interest to you. We shall strive to partially gainsay the famous English cleric-wit, Thomas Fuller, who three centuries ago, said, "Learning hath gained most by those books by which printers have lost."

To give our readers editorial matter which is both informative and interesting we must depend, to a great extent, on the readers themselves. Realization of the hope that the magazine's various departments will create sufficient interest to become widely read, is dependent upon the cooperation of these readers.

I shall be most grateful to those readers who take it upon themselves to become actively interested in ARMED FORCES MANAGEMENT and send us data on new suggestions, thoughts on conservation, interesting news items from the various branches of the armed forces, information about management-slanted curricula in the service schools, and any suggestions covering improvement of the magazine. They also have an opportunity to express their views in our "Letters to the Editor" column.

We trust that you will view the lack of material in these departments in our initial issue, as understandable and, being sympathetic, will endeavor to save the editor from becoming completely white-haired by immediately sending in information to the departments mentioned.

Every member of the staff of ARMED FORCES MANAGEMENT is a veteran of one of the services. Proud of his part in the publication of this magazine, which fills a three-fold purpose, he feels that he is helping a member of the armed forces supplement his management knowledge, ease the burden of John Q. Taxpayer through dissemination of information on good management practices, and finally, because he is taking an inactive but important role in his country's defense.

Yours very truly,

LFH:imh

LeRoy F. Holst
Editor

The supreme belief of our society is the dignity and freedom of the individual. To the respect of that dignity, to the defense of that freedom, all effort is pledged.

—Dwight D. Eisenhower



Letters to the Editor

Dear Editor:

A friend of mine gave me your address and told me you were publishing a magazine entitled *Armed Services Management*. I have a question to ask you or your readers and in part payment for an answer I am enclosing a check for \$4.00, which should be sufficient for a year's subscription.

I am one of those confused persons dealing daily in property accountability. At the present time there are four distinct and separate property accounting systems in use by the Armed Forces. This makes my job and the people in my department responsible to understand these four methods. Surely one of these must be better than the other three and it would seem reasonable to me that someone perhaps at the Department of Defense level, would lay them side by side and select the best and direct the others to conform. I do not believe that property accounting is so different in the services to warrant special consideration of individual service require-

ments. Perhaps this letter sounds like I am beating a particular drum and I do not want you or your readers to think that. I am just one of those who must teach all systems and to me it's an unnecessary one . . . I cannot expect you to have the answer but perhaps its inclusion in one of your issues would produce some provocative thinking and ultimately solve my problem . . .

Editor's Note: This letter, received from an officer on duty at the Pentagon, is the only letter we have to offer in our first issue. We have hopes that this department may become an interesting highlight each month, through the exchange of opinions on a wide variety of subjects.

We will either carry the writers' name or omit it, as the correspondent wishes. Undoubtedly there is someone in the field who either has the answer to this \$64 question, or may have ideas covering it, which would be of interest to **ARMED FORCES MANAGEMENT** readers—so, keep 'em coming!

What's NEW in Suggestions?

In the past few years, suggestion programs have proven so valuable that Government departments have banded together with some of the nation's leading corporations, Standard Oil (N), National Biscuit, Sears, Roebuck, International Business Machines, John Hancock Life, American Airlines and Westinghouse, in the promotion of employee suggestions. Last year estimated savings to the government exceeded \$44 million. To save this cost money too, and General Motors paid more than \$2 million to their employees for an average of \$52 per suggestion. Ford Motor Company, Du Pont and General Electric all paid out more than a half-million. It has been found that the dividend yield far exceeded the outlay of dollars expended.

The Boeing Airplane Company states that their cost of employee suggestion awards totaled \$105,000 and that these saved the company \$1,653,000. Suggestions then are really "big business", and in furtherance of this, most large companies today have expertly staffed departments working full-time on suggestion programs.

We at *Armed Forces Management* were asked the question, "How can I make a program work?" To make a department hum with activity the first rule to remember is—Commanding Officers must be ready to welcome any and all suggestions. Time must be allocated to study them with a view toward their potential savings, and then employees must be paid a sum equal in part to that savings. Many

corporations give 10% to 20% of the first year's savings on a new idea. Suggestions in the Armed Forces to be really valuable must be passed along to other installations and this is the intent of *Armed Forces Management*. These columns will be devoted each month to suggestions received and with the assistance of a committee of industrialists we will pay \$100 to the best suggestion received in the next 12 issues. This award does not exclude Military Personnel as unfortunately regulations today specify. We encourage any and all personnel both military and civilian employed within the services to send suggestions marked "SUGGESTION COMMITTEE" *Armed Forces Management*, 121 North Madison Street, Rockford, Illinois. Our first issue contains only a few that word of mouth advertising has induced. We offer them to you for your use and hope each issue will bring more from the field for your consideration.

United States Navy: Several months ago Mr. Tom Metropolis, a civilian inspector for the Navy attached to Pratt & Whitney Aircraft's Meriden plant, invented a new gauge which reduced parts inspection time approximately 15%. We know it will interest him that this suggestion is now in use at several installations.

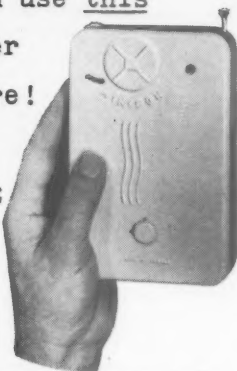
10th Inf. Div., Fort Riley, Kansas: A new modification to present equipment used to remove lenses from binoculars, paid off for Harry Goudy recently, when he was given a check by Maj. General P. D. Ginder, Commanding General. Details of the modification, which saves Fort Riley more than \$1500 yearly are available from the Post Ordnance Section.

Fort Leonard Wood, Missouri: The Quartermaster Section of Fort Leonard Wood is still on top with suggestion awards. Major General A. C. Lieber, recently approved three suggestions from the Post Laundry. Mrs. Hazel G. Payne, for a new identification tag on laundry baskets; Miss Nellie F. Barnes, for her idea on accounting for cooks' whites and Emery Clement for simplification of bookkeeping methods.

Naval Air Station, Alameda, California: Mr. Robert L. Page and Mr. Alvin R. Clark are both \$360 richer after the BUAER added to the suggestion paid by NAS Alameda for their joint submission of plans for a jig used to reconstruct and realign F9F Panther jet tail sections.

Finance Center, Fort Benjamin Harrison, Ind.: Top money winners for suggestions submitted at the Finance Center recently were: William R. Jeffers, Barbara L. Wilson and Beatrice B. Thomas.

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SERVICE SCHOOLS

UNITED STATES MILITARY ACADEMY, West Point, New York. Management instruction at the Military Academy is introduced to cadets not only in staff coordination and activities, but down to the platoon and company level, where management problems are given cadet groups for discussion and solution.

THE AIR UNIVERSITY, Montgomery, Alabama. The Commandant of the Air University, who has an additional responsibility for Air Force ROTC Programs, reports that an important phase of this training is directly connected with Management. The ROTC Program being conducted in more than 200 American colleges and Universities, stresses the techniques of leadership in the future officers of the Air Force.

THE ORDNANCE SCHOOL, Aberdeen Proving Ground, Maryland.

Colonel A. W. Manlove, newly appointed Commandant and long an advocate of Management in the Armed Forces, will undoubtedly insure its inclusion in all courses offered at Aberdeen.

HEADQUARTERS THE INFANTRY CENTER, Fort Benning, Georgia. In a recent letter from the Commandant, it was learned that some new and illuminating concepts of Management have been developed. Sound Military Management has been included in both the Infantry Center and the Infantry School curricula.

USAF INSTITUTE OF TECHNOLOGY RESIDENT COLLEGE, Wright-Patterson AFB, Ohio. Congressional approval was recently received at the College to award degrees to graduates.

14TH NAVAL DISTRICT, Hawaii. Management in purchasing is taught in the Navy Purchasing School being conducted at NSC, Pearl Harbor, by personnel of the Navy Purchasing Office.

3585TH FLYING TRAINING WING (L-H) Gary Air Force Base, Texas. A 40 hour management training course, conducted by the Management Division of Wing Headquarters, is available to Base supervisory personnel. This small but efficient school stresses the principles and functions of management and organization, principles of motion economy and personnel relations. Detailed information we are sure is available by writing the Commanding Officer, at the above address, Attention: Management Division.

CHICAGO ORDNANCE DISTRICT. Announcement was made on 21 September that to fill the growing need for top-level industrial management ability in the Ordnance Corps, a group of Army Officers will be enrolled in the Executive Program of the University of Chicago, School of Business.

UNITED STATES AIR FORCE. Thirty Air Force field grade officers will be trained at the Air Force Advanced Management program at George Washington University, Washington, D.C.

ARMED FORCES MANAGEMENT

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NEWS BRIEFS

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SERVICES

BUREAU OF SHIPS, U.S. Navy. Roller type paint applicators have recently been approved for use by BUSHIPS and are presently on allowance lists. The use of roller applicators on flat surfaces results in a material savings in manpower and time.

SIXTH ARMY HEADQUARTERS, San Francisco. Additional acreage of government owned lands for grazing and agriculture will increase annual revenues by \$20,000.00, and reduce maintenance costs by more than twice this figure.

429TH INF. REGT. 35TH INF. DIV., Michigan. This far-famed organization recently won top efficiency honors in training status competition.

NAVAL AIR STATION, Jacksonville. Wins credit for savings in excess of \$40,000.00 annually. This savings is a result of a new idea in jet engine overhaul procedures, and may well be but a drop in the bucket, if applicable throughout the Bureau of Aeronautics.

U.S. MARINE CORPS. Announcement was made recently that the United States Marine Corps would reinstate the old "Drill System" so familiar to us all. It is felt that leadership at the platoon and company level will be stronger after the change.

UNITED STATES COAST GUARD. Laurels were recently received from the Mayor of St. Petersburg. The mayor when forced to choose between a new 15 mile bridge across lower Tampa Bay, and the Coast Guard Station, said, "We have selected the Coast Guard." He later expressed the City's appreciation for having the station in St. Petersburg.

MILITARY SEA TRANSPORT SERVICES are sporting brightly painted life buoys. They are more easily detected from aircraft than those formerly painted white. In addition, it was found that this was submitted as a suggestion and paid off \$100.00.

THE ADJUTANT GENERAL, who is constantly studying methods of improving his papermill flow, has recently completed a training program throughout the department which has hoped of saving approximately \$200,000.00 annually.

NAVAL SUPPLY DEPOT, Spokane,

Washington. As an example of the excellent Management Review Program at the Depot, a large West Coast manufacturer recently adopted a work evaluation procedure which was originated at NSD.

BLACK HILLS ORDNANCE DEPOT, Igloo, So. Dakota. A new management program, named MCI (Management Control Intelligence), founded on the idea that every man hour and every dollar of labor resource expended, is the responsibility of some one supervisor, and that he should be provided with the intelligence (information) necessary to manage these resources, was recently put into effect.

FORT BENNING, GEORGIA. Consolidation of the First Transportation Battalion and the Transportation Motor Pool has resulted in a \$10,000.00 monthly savings. This figure does not include an additional \$2,000.00, which was saved in tools and equipment turned into supply channels.

USS INTREPID (CVA-11) which has been assigned as flagship for the Commander, Air Force, Atlantic Fleet, is reported to be in top condition after her two year facelifting operation. She is now one of the top carriers in her class.

VETERANS ADMINISTRATION HOSPITAL, Fayetteville, N.C. The Admission service in the registrar's division has again been streamlined to permit more hospital time to attending physicians.

LONG BEACH NAVAL SHIP-

YARD, California. Grinding wheel storage at this installation has been consolidated with a material savings in costs and increased efficiency. One of the more salient savings was in the reduction of inventories and better stock control.

HILL AIR FORCE BASE, Utah, has been assigned the prime responsibility for the Transportation Corps' XV-1 Convertiplane.

DECATUR SIGNAL DEPOT, Illinois. The dispensing of gasoline was recently incorporated into the activity of the Motor Pool stockroom without an increase of personnel. The savings will run to more than \$3,000.00 per year.

AIR MATERIEL COMMAND, WRIGHT-PATTERSON AFB, Ohio. A savings of more than \$2,000,000.00 was accrued last year by taking advantage of cash discounts. This figure represents purchases exceeding 11 billion dollars.

UNITED STATES MARINE CORPS recently demonstrated a standard helicopter, whose rotor blades had been equipped with tiny rocket engines, at the Naval Air Station, Anacostia. Tests, for the first time made public, showed an effective power boost of 20%.

HOLLOMAN AIR FORCE BASE, New Mexico. Lt. Col. John P. Stapp recently set a new ground speed record of 421 miles per hour in the rocket-propelled sled.

USS NAUTILUS. The world's first nuclear-powered submarine was commissioned 30 September in colorful ceremonies at the Groton, Conn., shipyard of the Electric Boat Co.

UNITED STATES FORCES IN AUSTRIA. A careful review of requirements has resulted in reduction of expenditures by almost a million and one-half dollars. This, to a "cost conscious" nation, is conducive to higher esteem of the Armed Forces.



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Book Reviews

THE AMERICAN CONCEPT OF LEADERSHIP, by Colonel Sherman L. Kiser, U.S. Army, Retired. (Pageant Press, New York. \$4.00.)

The special qualities of leadership, as explored by Colonel Kiser, are discussed in a way that is not only intensely interesting but highly informative to executives, administrators, personnel of the armed forces, in fact, anyone who is about to become, or has aspirations to become, a leader of people. Between the covers of his book, leadership is portrayed as an exact science and not as heretofore, left to be absorbed by those few fortunate born with leadership qualities.

With a background of nearly forty colorful and dramatic years in the regular army, the Colonel has written a book which has been given unstinted praise by those who know leadership first hand—they are top-flight leaders themselves.

A personification of outstanding leadership, James A. Van Fleet, General U.S. Army, Retired, says, "I knew Colonel Kiser in Europe in World War II, and later in New York with the First Army, and became aware of his unusual leadership ability.

"His broad and long experience, deep understanding of his fellow man and devotion to the cause of true leadership, qualify him to speak with conviction and authority.

"I have found his book, **THE AMERICAN CONCEPT OF LEADERSHIP**, to be the only one that gives a proper mental orientation on the subject and the principles of the exact science."

DEVELOPING YOUR EXECUTIVE ABILITY, by Howard Smith. (McGraw-Hill Book Company, \$3.75.)

For the aspiring executive, Howard Smith's new book should prove of inestimable value in furthering his ambition. Proving conclusively that executive genius is not innate, but is the result of concentrated effort, the noted Chicago Public Schools executive and lecturer shows how it's done.

Detailing the specific means by which top businessmen, in a widespread variety of commercial enterprises, have reached the top, it seems to boil down to the fact that sticking doggedly to the job is not the key to success but the real "Open Sesame" is the sprint ahead, with a well-formulated plan in mind.

An interesting fact regarding the

brilliant Chicagoan's research, for the book's material, is that over 3,000 executives, alive today, discussed the subject with Mr. Smith. The evaluation of these discussions offers some very interesting reading and a quite plausible plan to start one on the right road to the front office.

APPLIED IMAGINATION, by Alex F. Osborn, Ph.M. (Charles Scribner's Sons, \$3.75.)

With teaching the student to understand and to apply his own innate creativity, to all aspects of his personal and vocational life, as its primary function, applied imagination seems to pave the way to an inevitable and important development in democratic education.

Bringing together practically all that is known of the principles and procedures of creative thinking, this fascinating book formulates the practical techniques, by which the creative imagination can be more productively utilized.

Something comparatively new, the study of applied imagination as a formal systematized discipline, was first offered to students in 1926, at New York University, when the first course in creativity was added to the University's curricula.

Having written four books on creative imagination, the versatile educator, financier, and leader in charitable and civic movements is a co-founder of one of the nation's leading advertising firms, Batten, Barton, Durstine and Osborne. This truly remarkable man, referred to by author Samuel Hopkins Adams as an "applied thinker," probably best summed up his views on creativity in an address at Massachusetts Institute of Technology. He said, "I submit that creativity will never be a science—in fact, much of it will always remain a mystery—as much a mystery as 'what makes our heart tick?' At the same time, I submit that creativity is an art—an applied art—a workable art—a teachable art—a learnable art—an art in which all of us can make ourselves more and more proficient, if we will."

THE TECHNIQUE OF HANDLING PEOPLE, by Donald A. Laird and Eleanor C. Laird. (McGraw-Hill Book Company. \$3.75.)

Dr. Donald A. Laird, internationally known psychologist, whose excellent feature, "Human Relations in Leadership," appears in this issue of **ARMED FORCES MANAGEMENT**, was ably as-

sisted by his research librarian wife Eleanor, in preparing this volume designed to help the average person achieve better human relations with others.

A widely-recognized authority on the subject, the erudite Industrial Consultant has been in demand for several years as a lecturer to supervisors, executives, salespeople and teachers. Dr. Laird gives eleven practical rules for successful dealing with people.

Practical psychologists, the Lairds present numerous human-interest examples, based on actual cases, which they have studied and analyzed, to illustrate how their techniques can be applied.

The chapter headings, in themselves, are quite intriguing: Helps for your human relations; Ask questions to win cooperation; Be brief to clear up troubles; Confident bearing to help control others; Directness to make personal contact; Earnestness to arouse enthusiasm; Friendliness to overcome opposition; Good-finding to uncover ability; Harness criticism in a way to win appreciation; Increase others' self-esteem to boost loyalty; Jingle praise to secure best efforts; Know your people to generate harmony; Leading—or driving?

A German translation of the book has just been published in Switzerland for circulation in the countries behind the Iron Curtain, to inform the peoples of these nations of the difference between our democratic way of life and that of the Soviet dominated Communistic countries.

THE WORKER SPEAKS HIS MIND ON COMPANY AND UNION, by Rev. Theodore V. Purcell, S.J. (Harvard University Press; \$6.00.)

After 44 months of talking to Swift and Company meat packing workers in Chicago's Packingtown, the Jesuit educator, who is Assistant Professor of industrial relations at Chicago's Loyola University, had amassed some amazing facts which he presents in this notable 344-page study.

Given much publicity in **TIME**, upon reaching the bookstores earlier this year, the book presents important worker psychology, of special interest to students of human relations.

The "Packinghouse Padre," as he became known to the workers, with whom he associated for nearly four years in making his revealing study, says, "I went among them in a double capacity, as both psychologist and priest . . . in a position of neutrality between company and union . . . almost all of them relaxed and spoke freely once we were underway."

ARMED FORCES MANAGEMENT

Given the sobriquet of "The White-Frocked Priest" because he wore a white coat to conform to sanitation rules, the educator-priest temporarily turned researcher found that 92% of the 202 workers interviewed showed more or less "favorable" attitudes toward Swift and Company. Of the rest, 14 were neutral and only one man's attitude was downright "unfavorable."

The number 1 want of the workers, Father Purcell learned, was steady work, without layoffs or cuts in hours or pay. Next to dependable income, the workers were most desirous of being treated with dignity—not bossed around.

Indeed, the book reveals that the concept of favorable human relations, when applied, pays dividends. Packingtown is a far cry from the company-hating "human beasts" who were the denizens in the "Jungle" of Packingtown described by Upton Sinclair, in 1906.

CONSERVATION



THOUGHTS

Through the medium of this column, the editor would like to introduce some thought-provoking conservation ideas. In turn, we desire to pass on conservation thoughts of various installations within the Armed Forces, and some in use by industry. We shall appreciate knowing what you are doing and how—in this line.

Here are two conservation themes for October, 1954.

1. **Conservation of Ideas:** Very often, ideas are given management by those working closely in the field. Here's a question. Are we always careful to listen to workers' ideas, encourage them and seek their advice?

2. **Conservation of Space:** Are we alert to wasted space? Materials improperly stacked? Keeping materials that should be salvaged? Allowing unused machinery to occupy valuable space? Avoiding usable space due to roof leaks or bad footing?

U VAC, an electrical data processing machine made by Remington Rand, has recently been installed at Wright-Patterson Air Force Base, Ohio. This machine is designed to conserve manpower and high hopes are held for its saving many dollars for the tax-payer.

M S—USNS GEORGE W. GOETHALS reports a novel water-saving gimmick. In the daily shipboard news-



After the Analysis Comes the Decision

By J. W. McDermott

In recent years, much has been written throughout the Defense Establishment about review and analysis. The primary purpose of review and analysis is to keep operating officials informed as to the status of their activities and resources and to indicate their progress in meeting programmed objectives. These analyses are not particularly mysterious. Analysis means, first of all, the gathering of facts. The gathering of facts, in turn, means the collecting of data directly and indirectly related to the situation or program. It also means the assembling of the data in such a way as to indicate trends, correlations, and the extent of any cause and effect relationships. In short, analysis is nothing more than an organized effort to use facts instead of spurious guesses and hunches in order to arrive at a sound decision.

Analysis will never be a substitute for management itself. It is merely a tool of good management. But, it is a vitally important tool in an organization where top management is removed from day-to-day contact with department heads, supervisors and employees. The less direct and remote the supervision, the more important the analysis of essential data becomes. The sooner the result of the analysis is available, the more valuable it is as a management tool.

Embodied in this subject is the fact that no matter how intensive or extensive the analysis may be, it takes an executive decision to implement the findings. The decision may simply be to do nothing, but at least it is a decision presumably based on deliberation and consideration of the facts. Indecision is debilitating—often there is greater risk in postponement than in making a wrong decision. There is an oft-repeated definition of an executive that never gets out-of-date: "An executive is a man who decides; sometimes he decides wrong, but he always decides." Inevitably, after the analysis comes the decision.

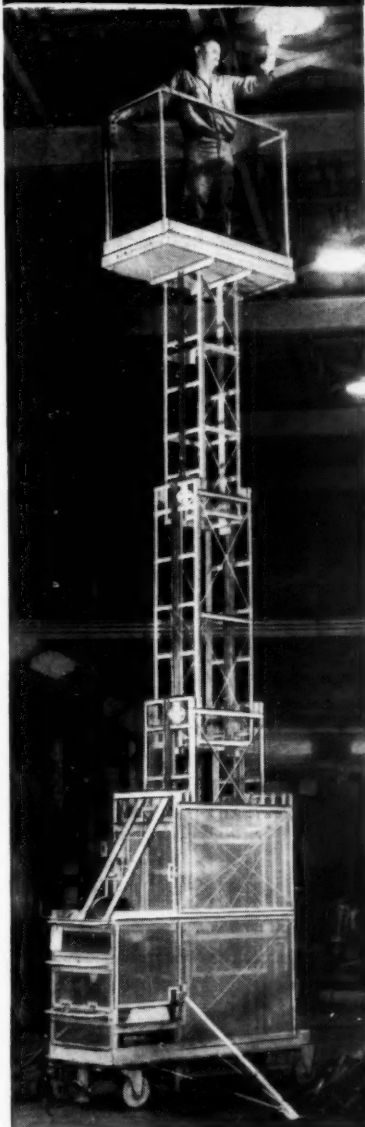
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